

FIG. 1

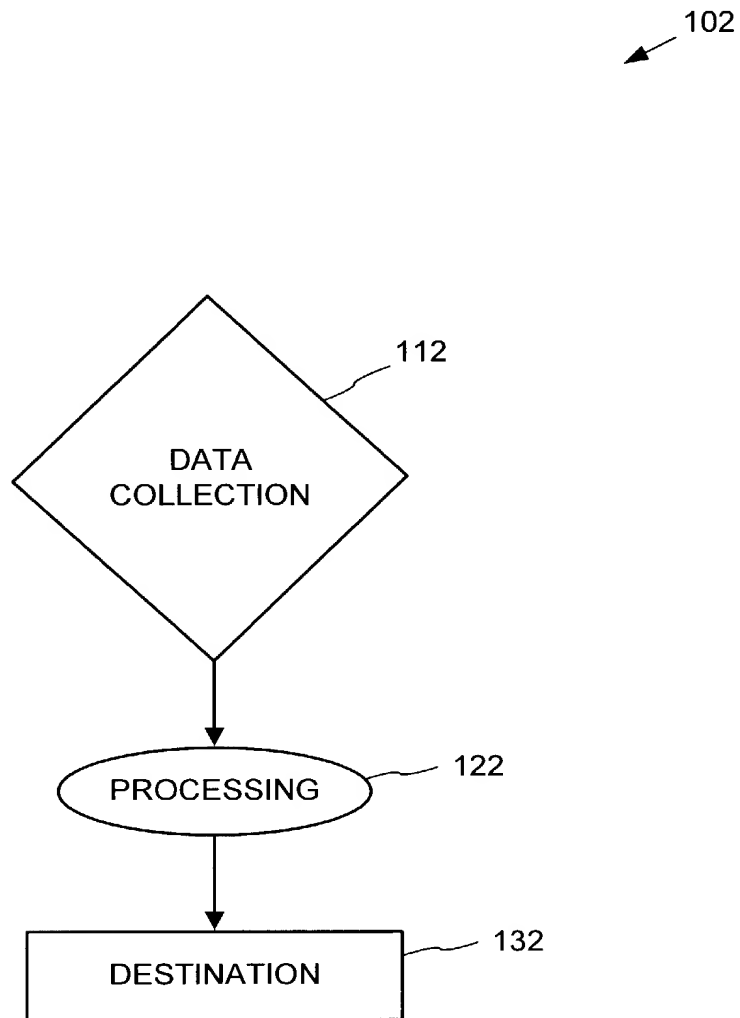


FIG. 2

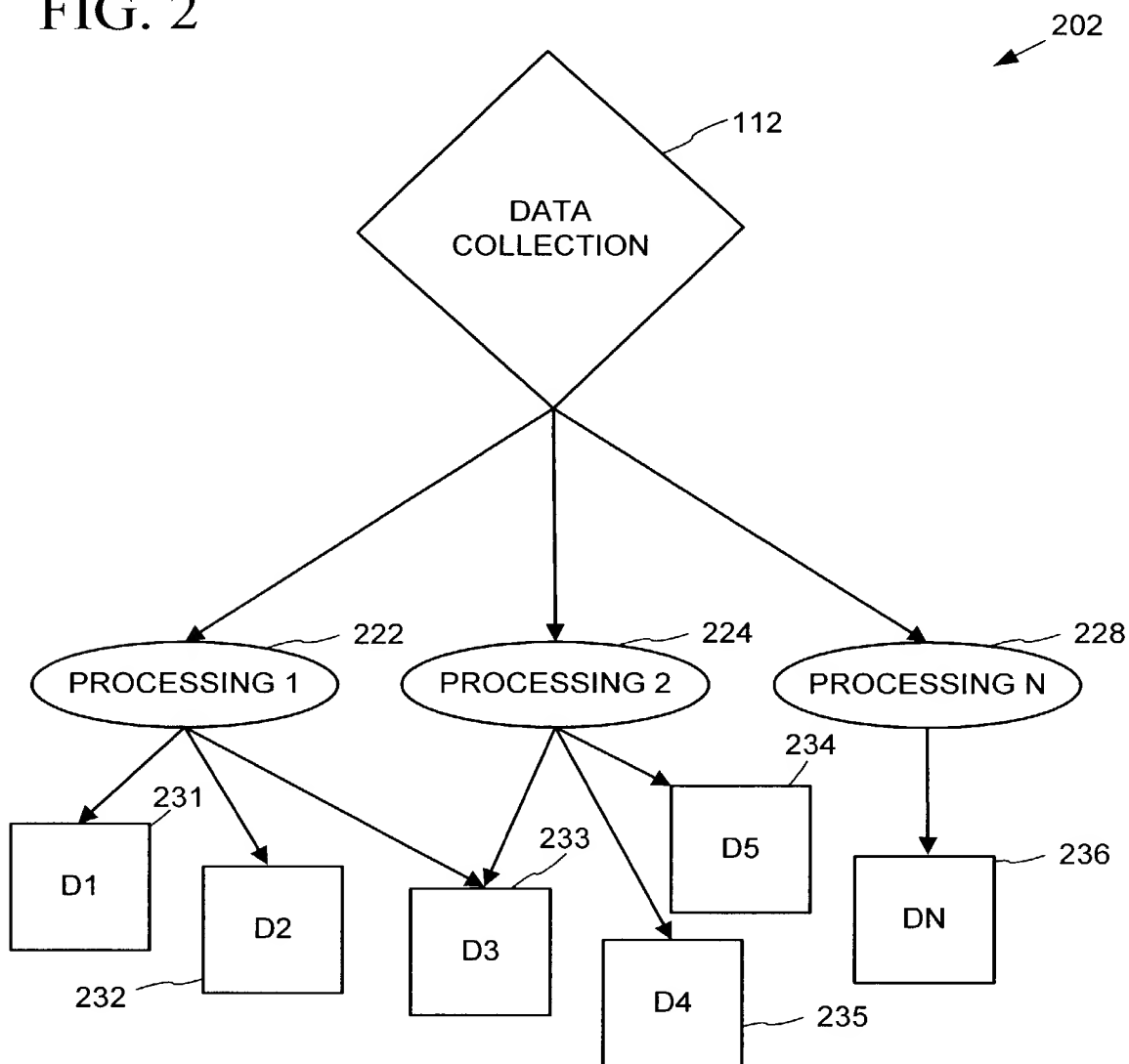


FIG. 3

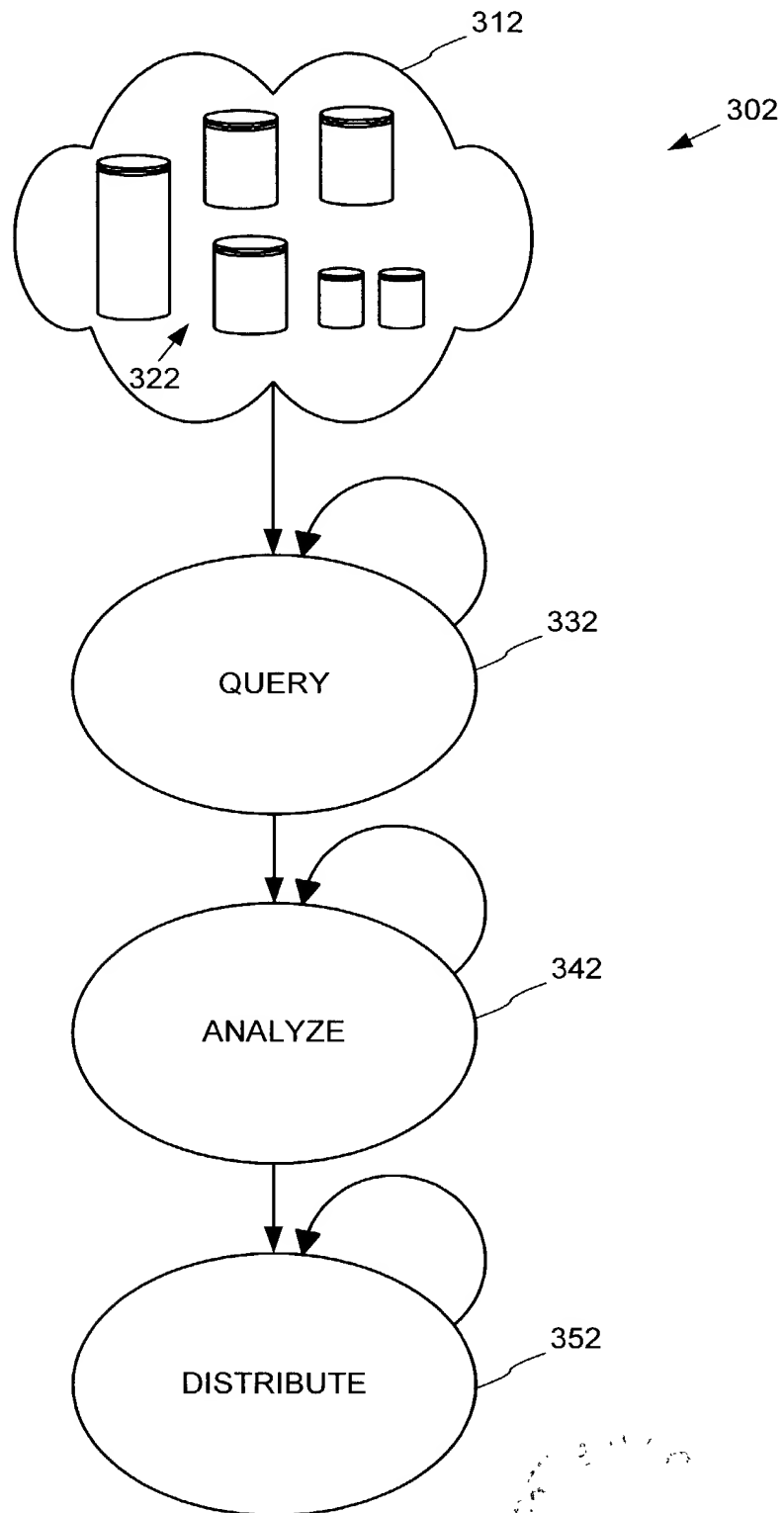


FIG. 4

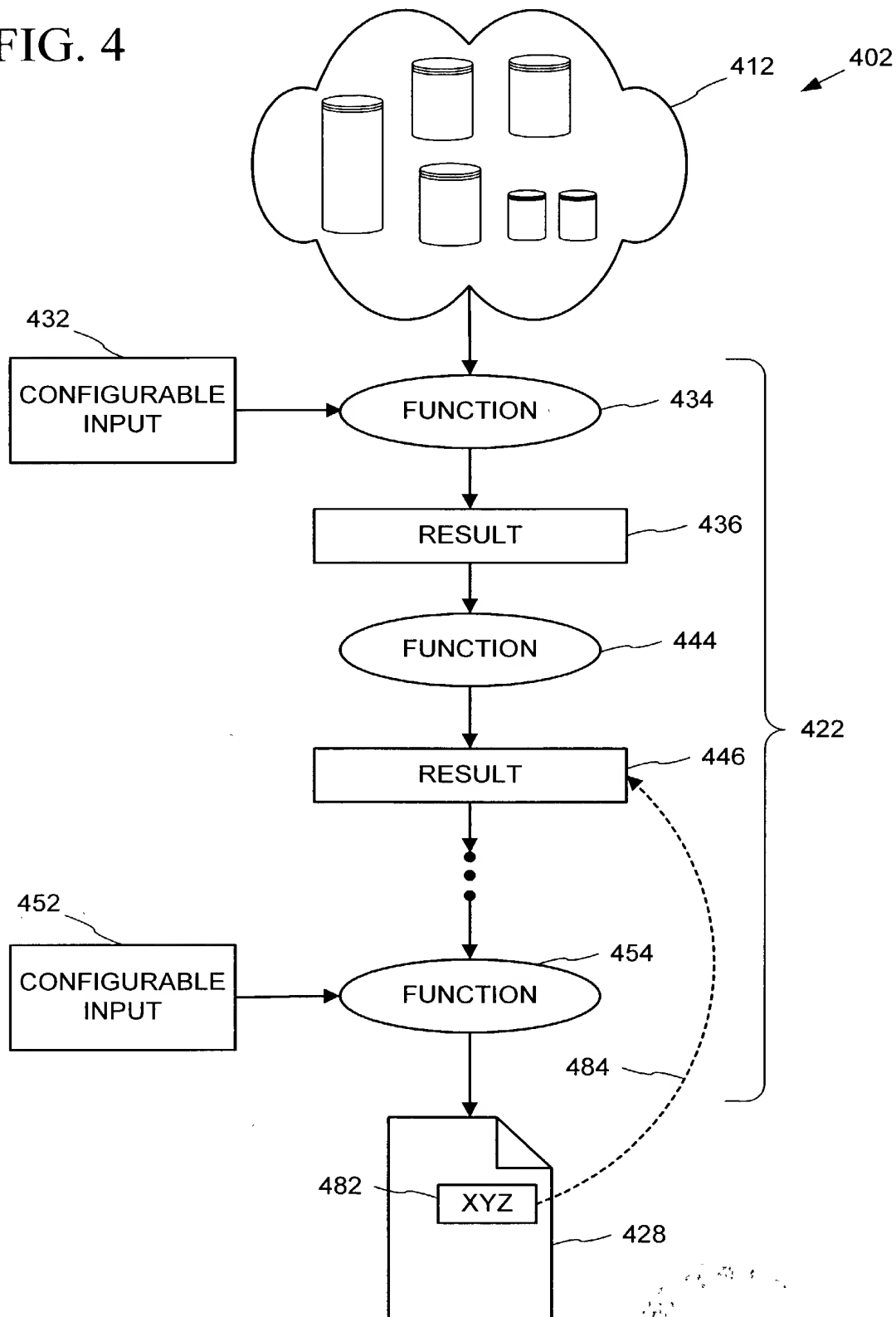


FIG. 5

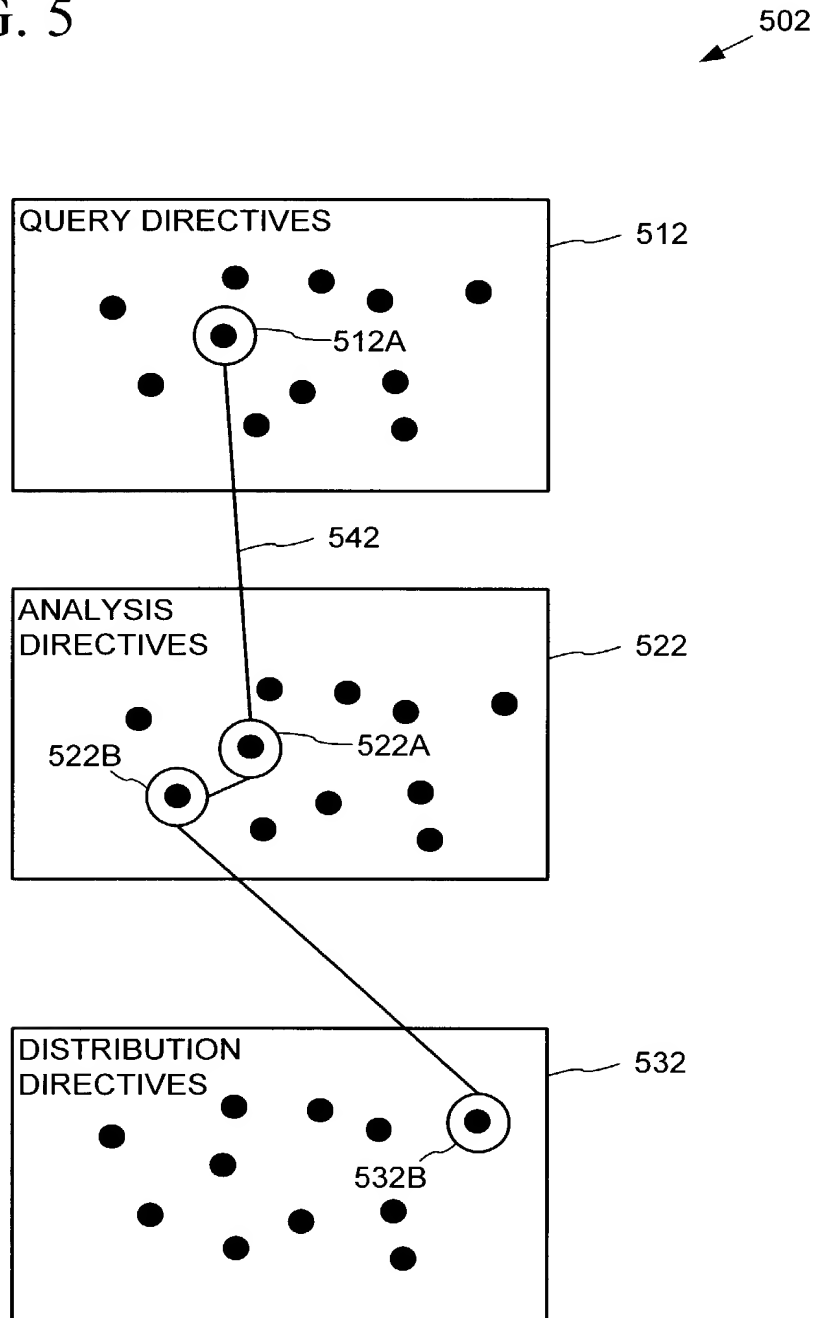
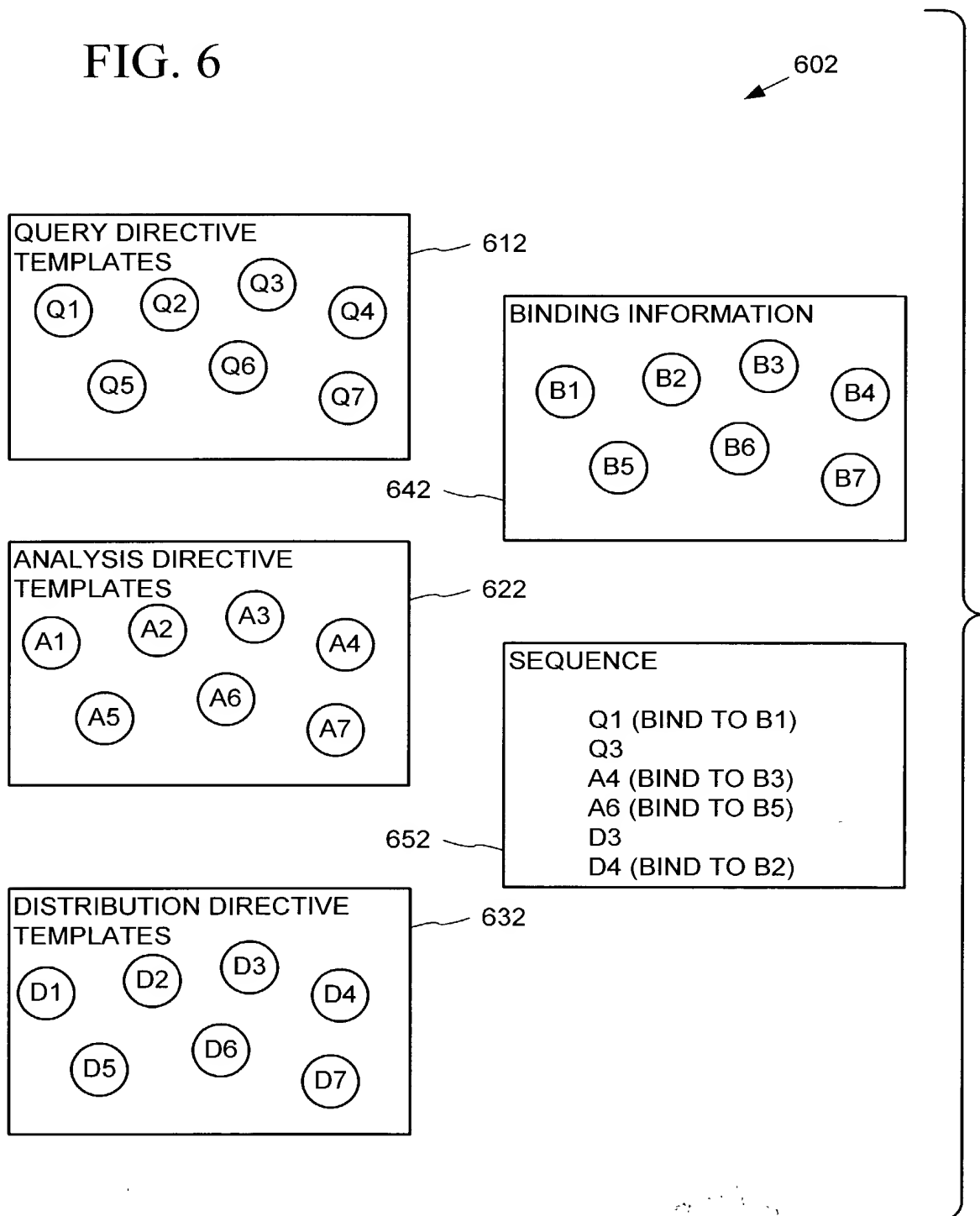


FIG. 6



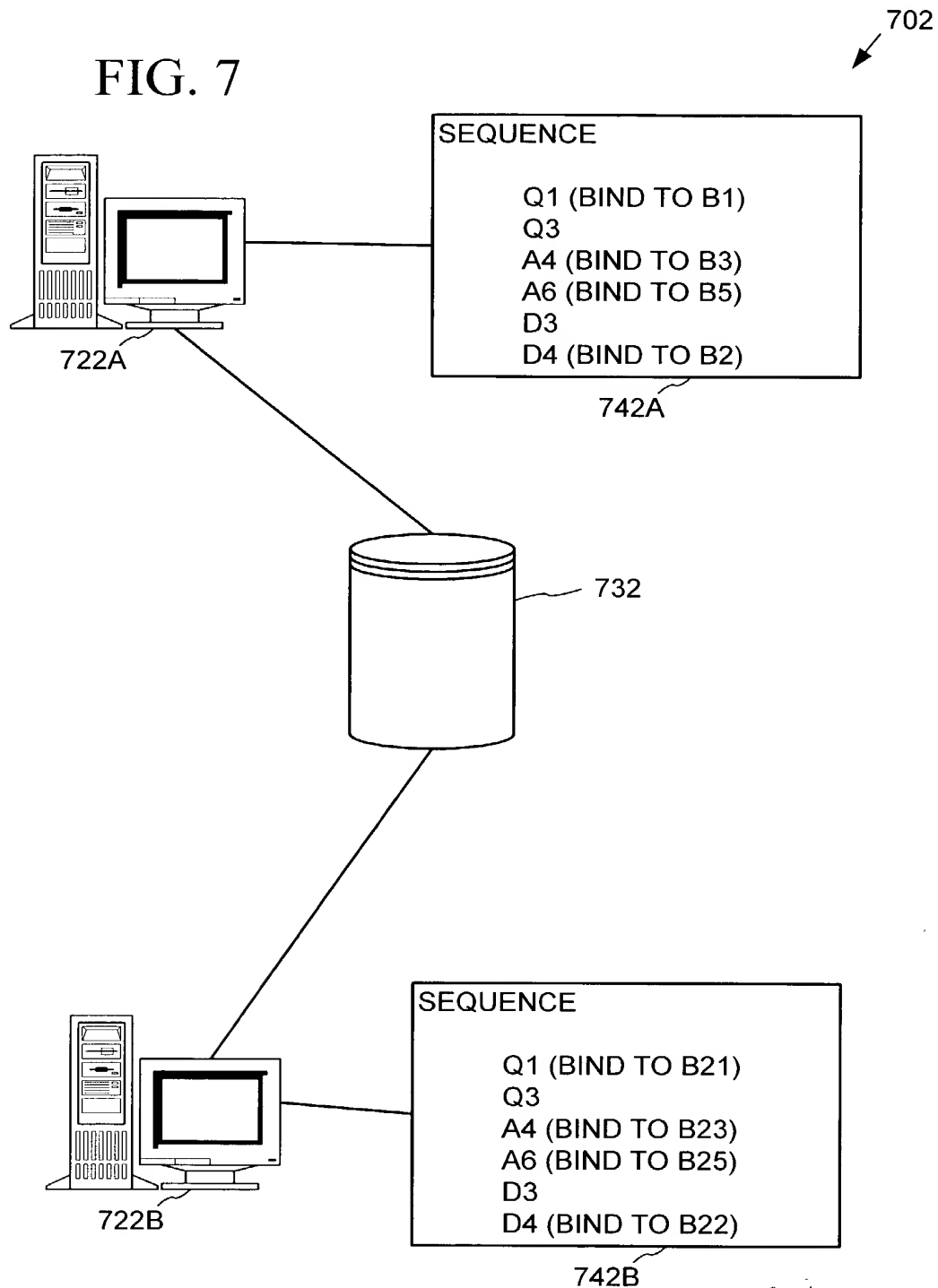


FIG. 8

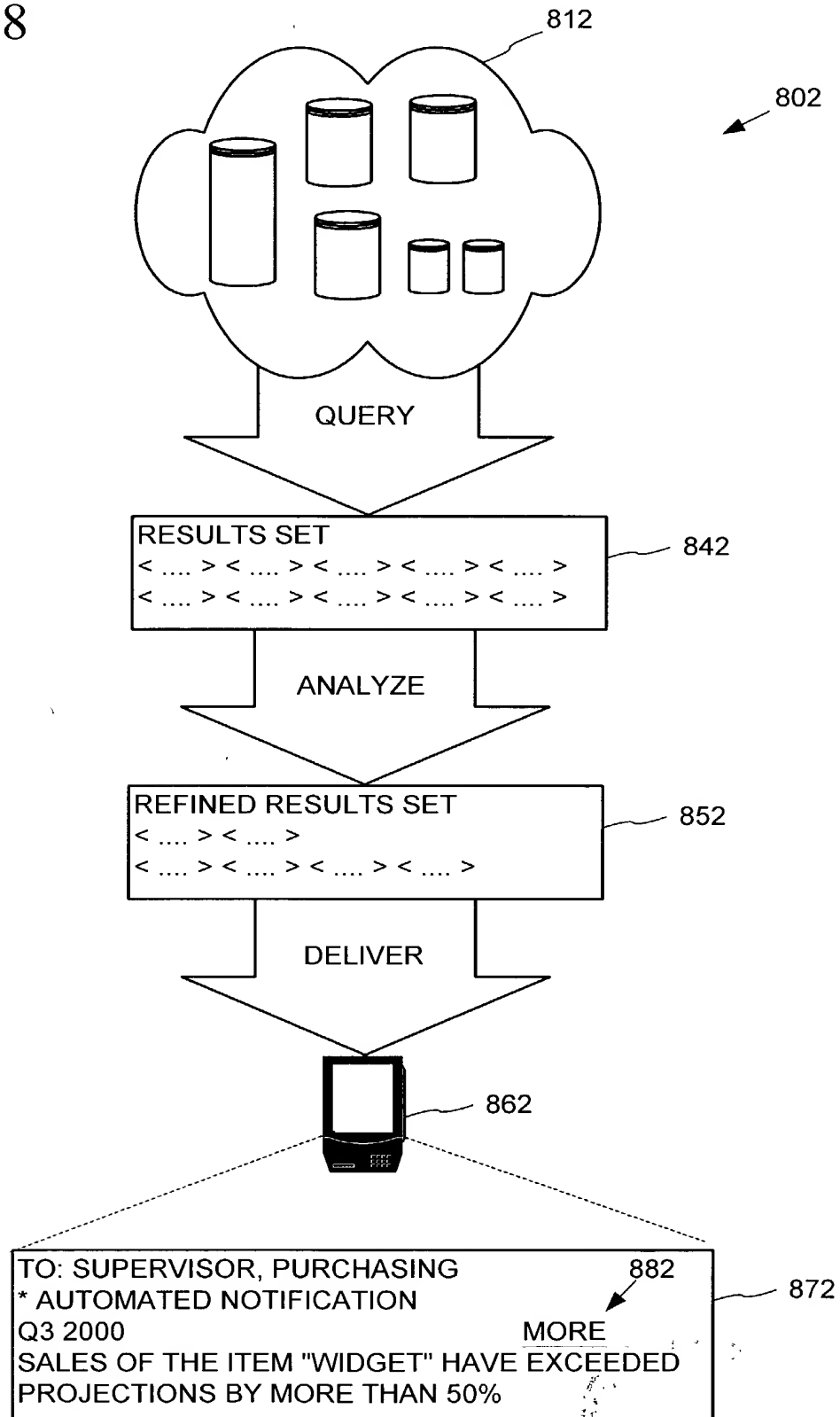


FIG. 9

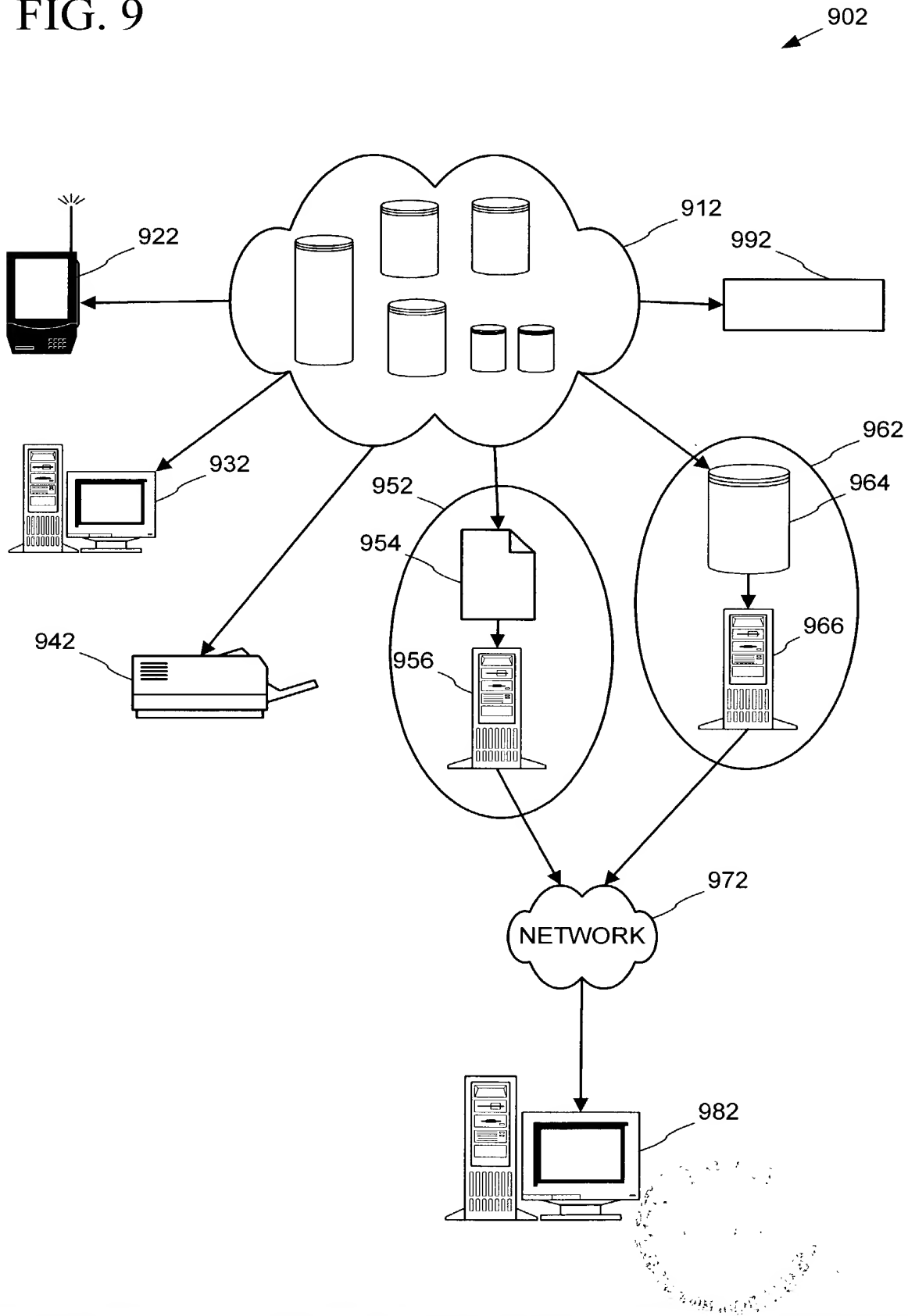


FIG. 10

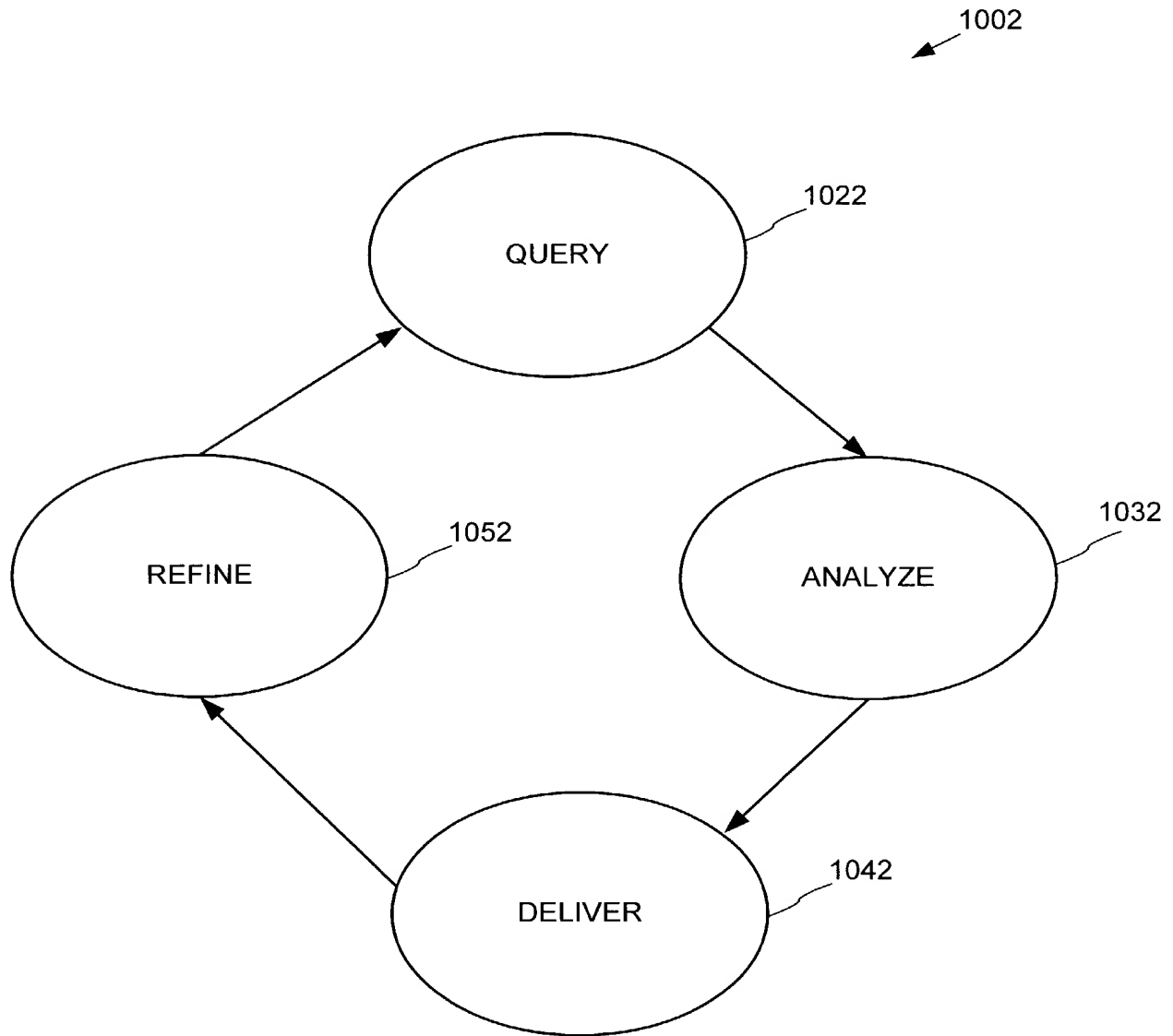


FIG. 11

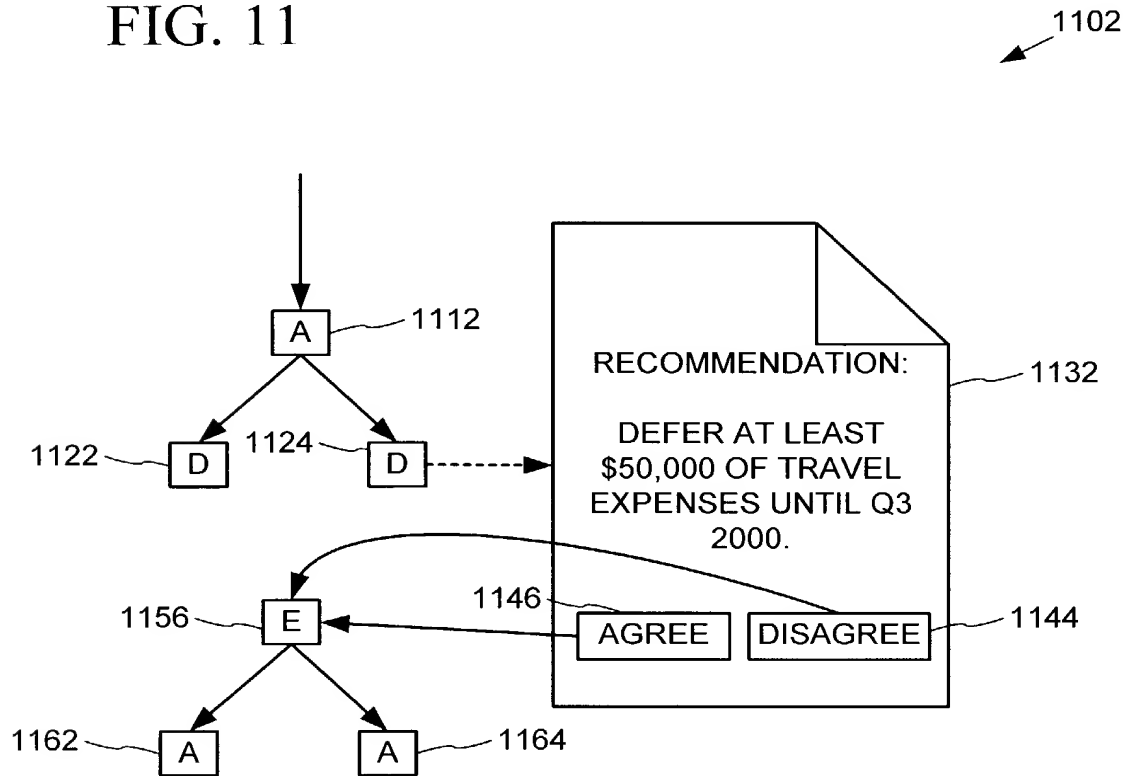


FIG. 12A

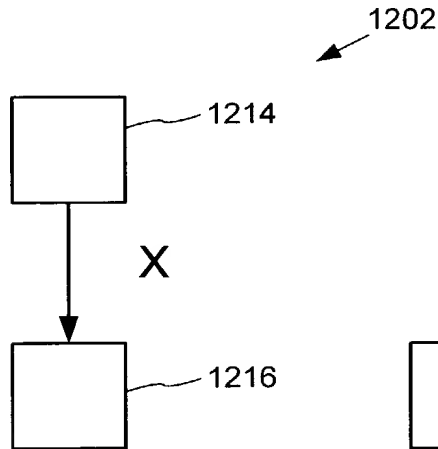


FIG. 12B

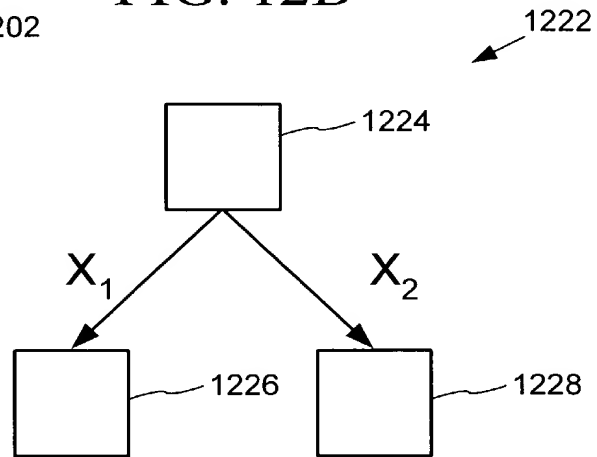


FIG. 12C

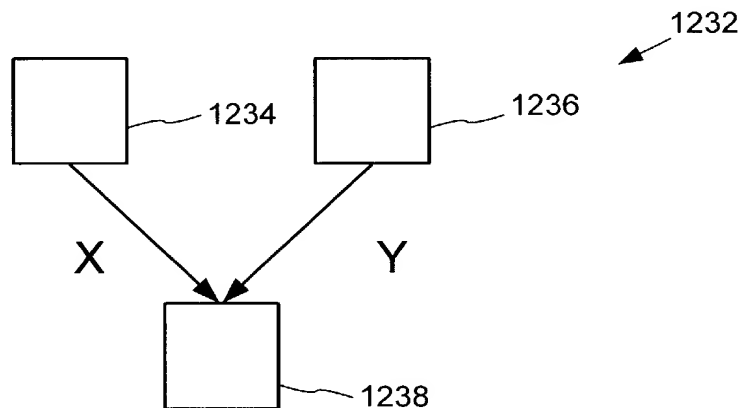


FIG. 12D

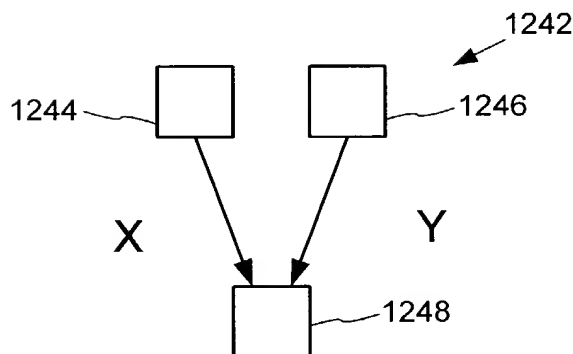


FIG. 12E

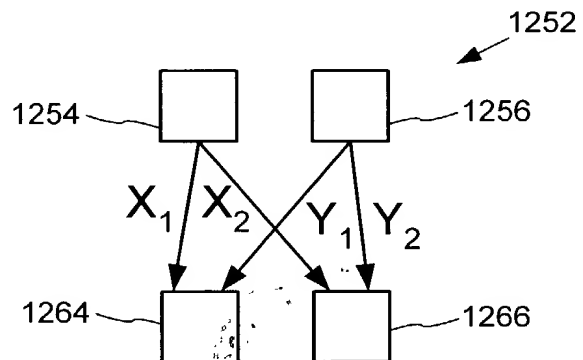


FIG. 13

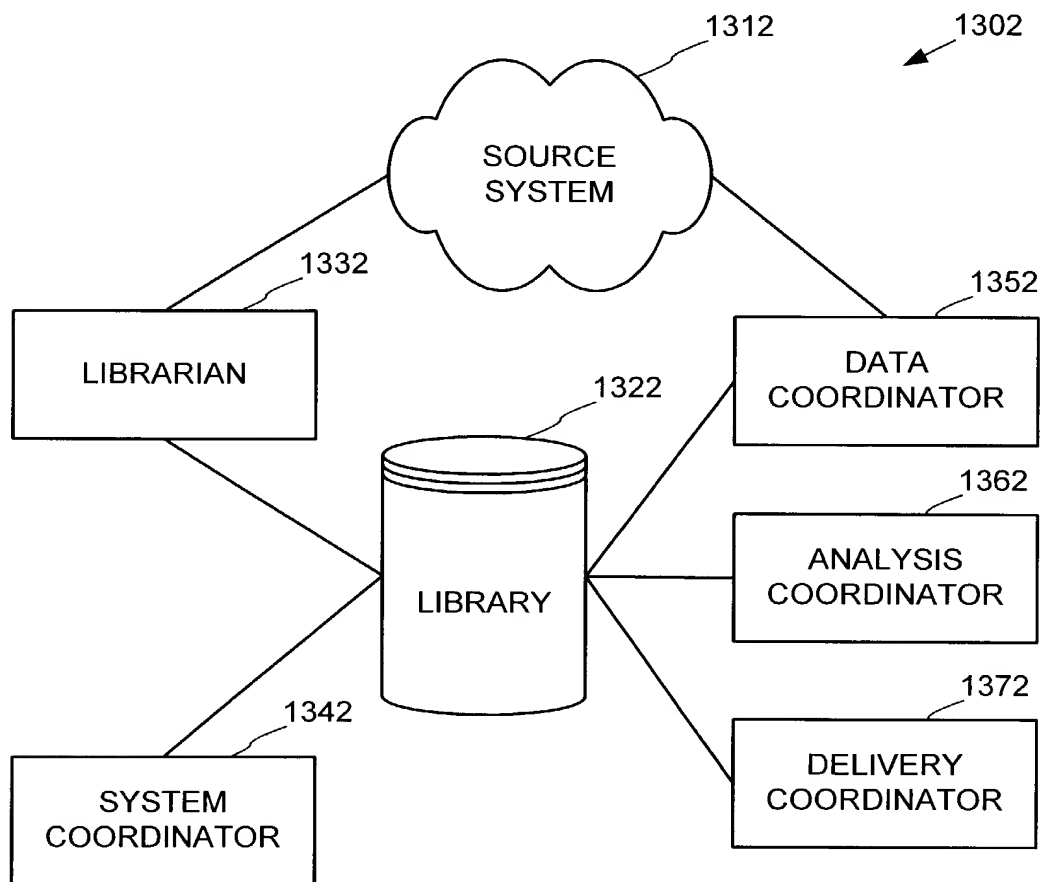


FIG. 14A

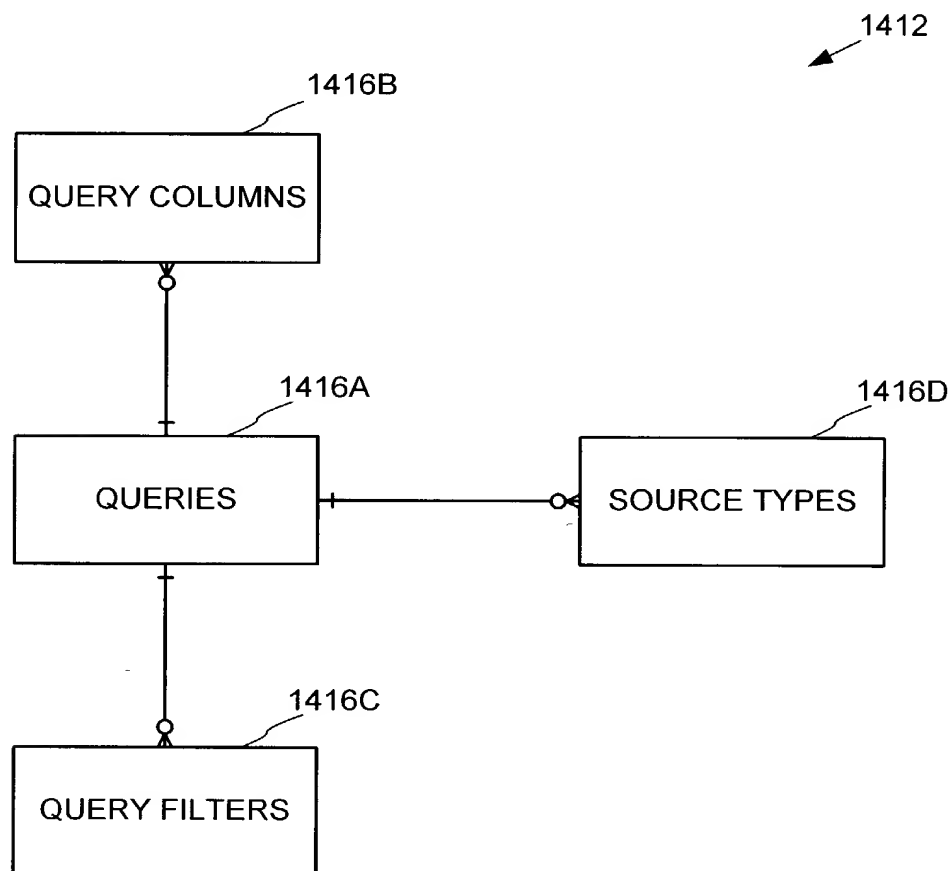


FIG. 14B

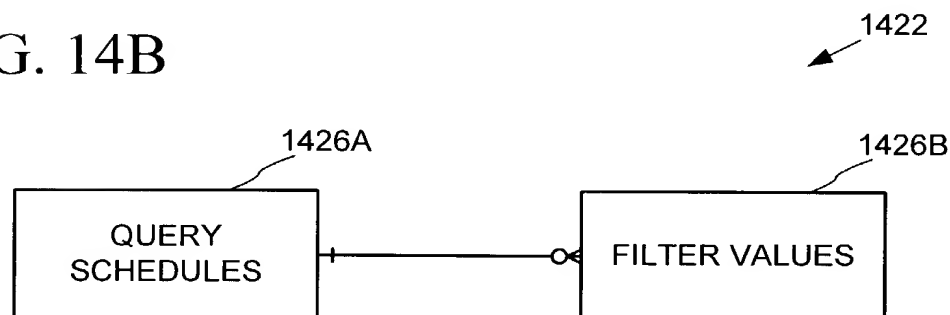


FIG. 14C

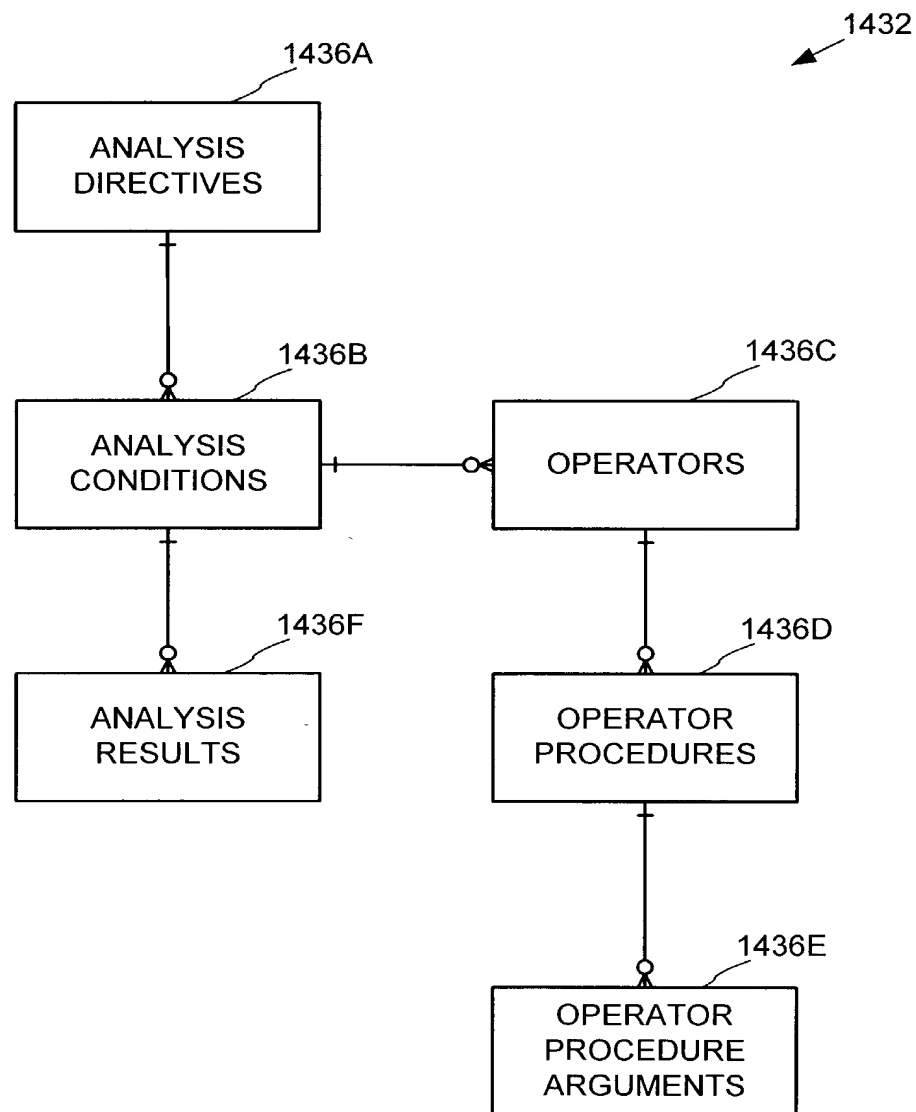


FIG. 14D

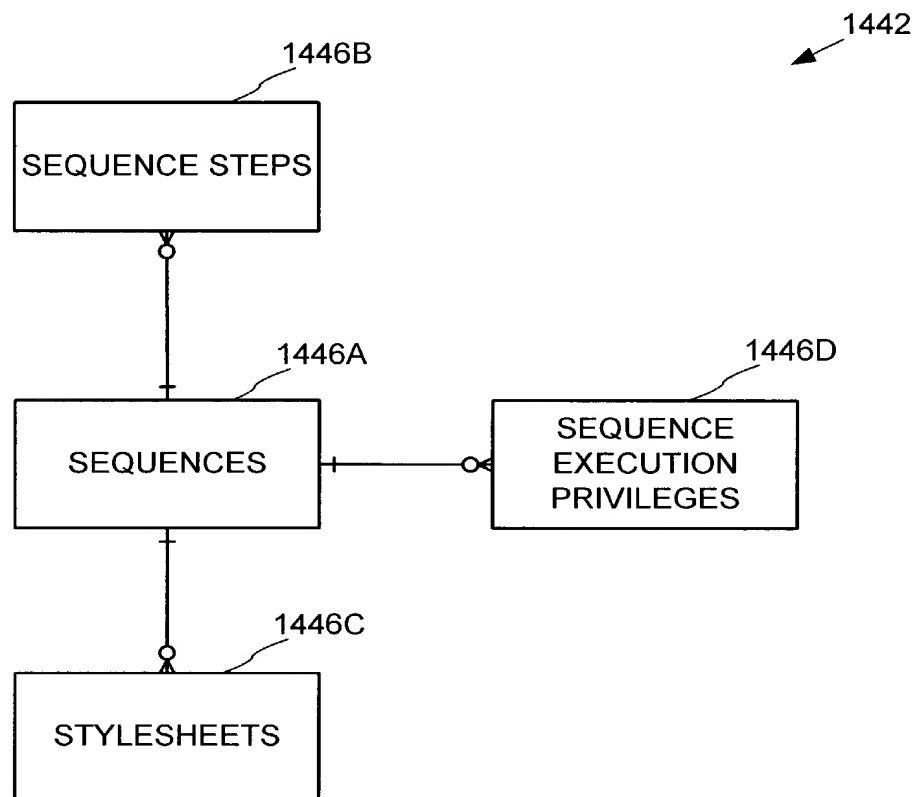


FIG. 14E

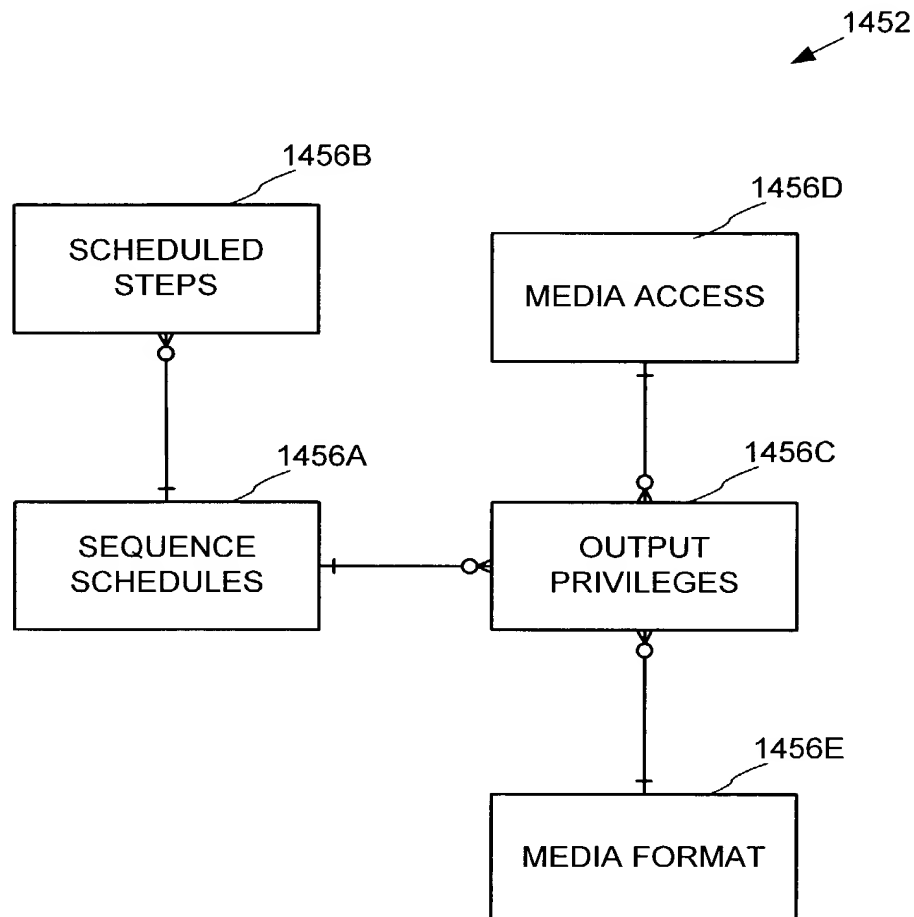


FIG. 14F

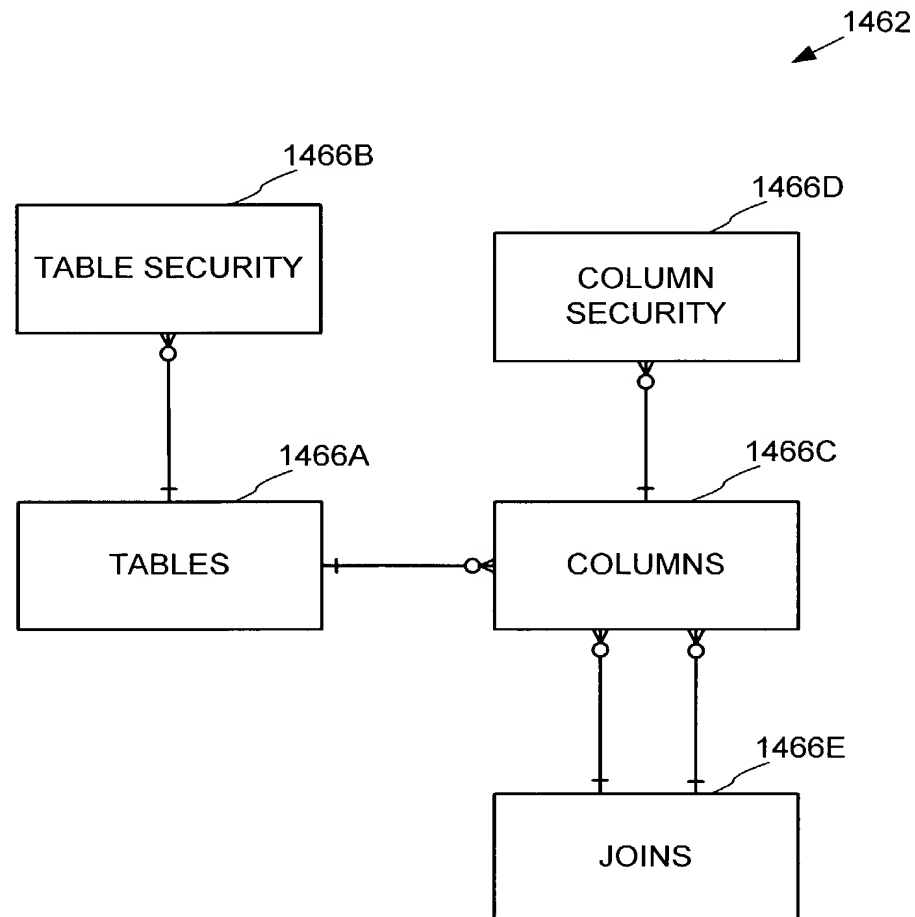


FIG. 14G

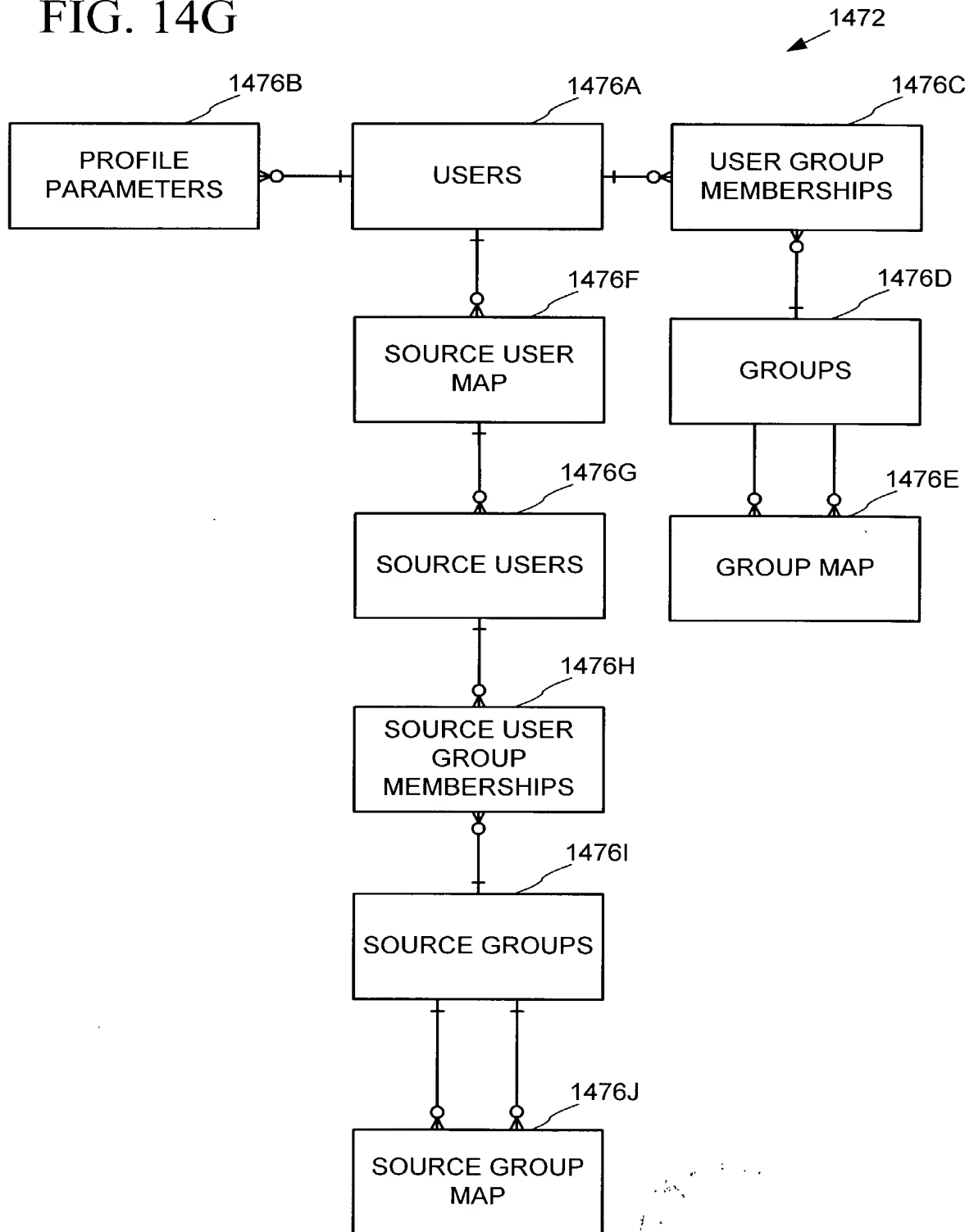


FIG. 14H

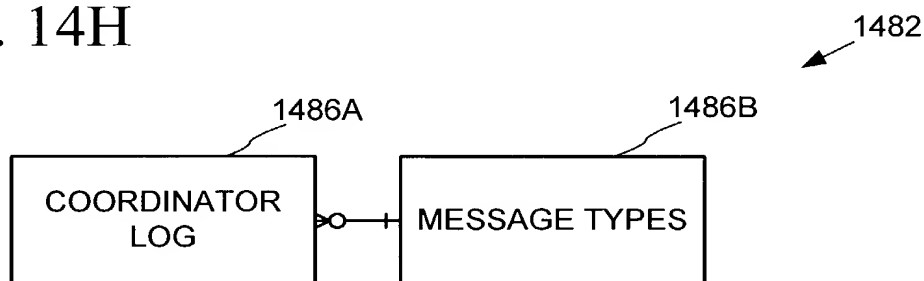


FIG. 15A

1502

QUERY DIRECTIVES						
NAME	DESC	SOURCE	USER	STATUS	OPTION	
NEW	NEW	SYSTEM A ▼	NB	AVAILABLE ▼		ADD
CC1	COST CENTER	SYSTEM A	EH	AVAILABLE ▼		MOD
AR-PTD	PERIOD TO DATE	SYSTEM B	LS	AVAILABLE ▼		MOD
REV	PTD REVENUE	SYSTEM B	LS	AVAILABLE ▼		MOD
FIN	FINANCIALS	SYSTEM B	LS	AVAILABLE ▼		MOD
SALES	SALES BY DEPT	SYSTEM B	LS	AVAILABLE ▼		MOD

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FIG. 15B

1504

QUERY TABLE & COLUMNS						
TABLE	COLUMN	GB?	ST	XML TAG	ROR?	SORT
SELECT COLUMN						
ACCOUNTING_DATE_D	▼					
AR_RCT_REV_RESN_D	▲					
AR_RECPT_STATUS_D						
AR_REVENUE_F						
AR_SCH_PMT_DTL_F						
AR_SHIP_VIA_D						
AR_SOLD_TO_CUST_D						
ASSET_BOOK_D						
ASSET_EMPLOYEE_D						
ASSET_INVENTORY_F						
ASSET_TYPE_D						
AUTHORIZER_D	▼					

09925125, 040002

FIG. 15C

1506

QUERY:NEW QUERY		QUERY TABLE & COLUMNS				
TABLE	COLUMN	GB?	ST	XML TAG	ROR?	SORT
DEPARTMENT_D	DEPARTMENT	<input type="checkbox"/> Y <input type="checkbox"/> ▼	<input type="checkbox"/> ▼	<input type="text"/>	<input type="checkbox"/> N <input type="checkbox"/> ▼	<input type="text"/>
<div>DEPARTMENT DEPARTMENT_DESC DEPARTMENT_KEY</div>		<div>ADD</div>				

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FIG. 15D

1508

QUERY TABLE & COLUMNS						
TABLE	COLUMN	GB?	ST	XML TAG	ROR?	SORT
DEPARTMENT_D	DEPARTMENT_DESC	Y		DEPARTMENT	N	1

ADD COLUMN

DONE

09925125.040002

FIG. 15E

1510

QUERY TABLE & COLUMNS						
TABLE	COLUMN	GB?	ST	XML TAG	ROR?	SORT
DEPARTMENT_D	DEPARTMENT_DESC	Y		DEPARTMENT	N	1
INC_STMT_LINES_D	LINE_NAME	Y		LINE_NAME	N	
INCOME_STMT_A	PTD_ACTUAL	N	SUM	PTD_ACTUAL	N	
INCOME_STMT_A	PTD_BUDGET	N	SUM	PTD_BUDGET	N	
INCOME_STMT_A	PTD_VARIANCE	N	SUM	PTD_VARIANCE	N	
<div>ADD COLUMN</div> <div>DONE</div>						

09925125 - 040002

FIG. 15F

1512

QUERY FILTERS					
QUERY:NEW QUERY					
TABLE	COLUMN	FILTER OPERATOR	ROR?	REF TABLE	REF COLUMN
BUDGET_D	BUDGET	IN	NO		REF TABLE
<div><div>= < > = < > =</div><div>ADD</div></div>					

FIG. 15G

1514

QUERY:NEW QUERY			QUERY FILTERS		
TABLE	COLUMN	FILTER OPERATOR	ROR?	REF TABLE	REF COLUMN
BUDGET_D	BUDGET	IN	N		
PERIOD_D	PERIOD	=	N		
DEPARTMENT_D	DEPARTMENT	=	N	DEPARTMENT_D	DEPARTMENT_KEY
<div>ADD FILTER</div> <div>FINISH</div>					

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FIG. 15H

1516

ANALYSIS SUBSEQUENCE				
YOU ARE TYING THIS ANALYSIS SUBSEQUENCE TO THE QUERY DIRECTIVE: NEW QUERY				
ANALYSIS SUBS NAME	USER NAME	RESULTS TYPE	LAST RUN DATE	OPTIONS
INCOME STMT ANALYSIS	NB	SHOW		ADD

09925125, 040302

1518

NAME : INCOME STATMT ANALYSIS

ANALYSIS SUBSEQUENCE

COND'N TYPE	CON'DN SEQ.	XML TAG NAME	XML TDT	XML TDF	OPERATOR	TV	OPT.
AND	<input type="text"/>	DEPARTMENT ▼	<input type="text"/>	<input type="text"/>	NOOP ▼	<input type="text"/>	<input type="text"/>

ADD

ADDITIONS COMPLETED

FIG. 15J

1520

ANALYSIS SUBSEQUENCE						
NAME : INCOME STATMT ANALYSIS	COND'N	CON'DN	XML TAG NAME	XML TDT	XML TDF	OPT.
TYPE	SEQ.					
AND			DEPARTMENT		NOOP	ADD
<div> <div>DEPARTMENT</div> <div> LINE_NAME PTD_ACTUAL PTD_BUDGET PTD_VARIANCE </div> </div> <div>ONS COMPLETED</div>						

09925125 040902

FIG. 15K

NAME : INCOME STATMT ANALYSIS

ANALYSIS SUBSEQUENCE

COND'N TYPE	CON'DN SEQ.	XML TAG NAME	XML TDT	XML TDF	OPERATOR	TV	OPT.
AND	1	PTD_ACTUAL			NOOP		ADD

ADDITIONS COMPLETED

TOP PCT

BOTTOM

BOTTOM PCT

> AVG

< AVG

< AVG PCT

> AVG PCT

AVG WITHIN

AVG OUT

AVG WITHING PCT

AVG OUT PCT

1522

09925125, 040002

FIG. 15L

1524

ANALYSIS SUBSEQUENCE									
NAME : INCOME STATMT ANALYSIS									
COND'N TYPE	CON'DN SEQ	XML TAG NAME	XML TDT	XML TDF	OPERATOR	TV	OPT		
AND		DEPARTMENT	▼		NOOP	▼		ADD	
AND	1	PTD_ACTUAL	▼		<>	▼	0	MOD	DEL
AND	2	PTD_VARIANCE	▼		>	▼	300000	MOD	DEL
AND	3	PTD_VARIANCE	▼		TOP PCT	▼	10	MOD	DEL
ADDITIONS COMPLETED									

09925125, 040802

FIG. 15M

1526

SEQUENCES				
ADD, EDIT OR DELETE SEQUENCES				
ID	NAME	DESCRIPTION	STATUS	USER OPT
	INCOME STAT'T ANALYSIS	INCOME STAT'T ANALYSIS	AVAIL ▼	NB ADD
24	FINANCIAL STATEMENT	FINANCIAL STATEMENT	AVAIL ▼	LS MOD
25	FSV	FSV	AVAIL ▼	NB MOD
26	COST CENTER SCORING 1	COST CENTER SCORING	DISAB ▼	LS MOD
27	COST CENTER SCORING 2	CSS PTD-VARIANCE	AVAIL ▼	LS MOD

09925125 040002

FIG. 15N

1530

ADD OR EDIT SEQUENCE STEP INFORMATION			
SEQUENCE NAME: INCOME STATEMENT ANALYSIS			
ID	STEP	DIRECTIVE TYPE	DIRECTIVE ID LUB LUD
28	1	QUERY DIRECTIVE	<div> <div>QUERY FOR STEP ▼</div> <div> <div>ADD</div> <div>DEFINE</div> </div> </div> <div> <div>AR - PTD REVENUE BY DEPARTMENT VARIANCE AND VARIANCE PERCENT NEW QUERY</div> <div>NEIL'S QUERY</div> <div>NEIL'S OTHER QUERY</div> <div>LARRY'S QUERY</div> <div>YET ANOTHER LARRY QUERY</div> </div>

0000407 52152500

FIG. 150

1532

ADD OR EDIT SEQUENCE STEP INFORMATION				
SEQUENCE NAME: INCOME STATEMENT ANALYSIS				
ID	STEP	DIRECTIVE TYPE	DIRECTIVE ID	LUB LUD
28	1	QUERY DIRECTIVE	NEW QUERY ▼	12/15/00 MOD DEFINE
28	2	ANALYSIS DIRECTIVE ▼	DIRECTIVE	
		QUERY DIRECTIVE ANALYSIS DIRECTIVE EVENT DIRECTIVE DISTRIBUTION DIRECTIVE		

09925125 040802

FIG. 15P

1534

ADD OR EDIT SEQUENCE STEP INFORMATION				
SEQUENCE NAME: INCOME STATEMENT ANALYSIS				
ID	ST	DIRECTIVE TYPE	DIRECTIVE ID	LUB LUD
28	1	QUERY DIR	NEW QUERY ▼	12/15/00 MOD DEFINE
28	2	ANALYSIS DIR	INCOME STMT ANALYSIS ▼	NB 12/15/00 MOD DEFINE
28	3	DISTRIBUTION DIRECTIVE ▼		DIRECTIVE

FIG. 15Q

1536

SEQUENCE NAME: INCOME STATEMENT ANALYSIS	
DISTRIBUTION FORMAT	
FORMAT	
HTML	<div>CREATE</div>
EXCEL	
HTML	
WAP	

FIG. 15R

1538

<p>HOME</p> <p><u>INSTRUCTIONS</u></p> <p>SEQUENCES</p> <p><u>AVAILABLE</u></p> <p>ADMIN</p> <p><u>SYS SETTINGS</u></p> <p><u>USERS</u></p> <p><u>LOGS</u></p> <p><u>APPL SETTINGS</u></p> <p><u>MEDIA SETT'S</u></p>		<p>SCHEDULE SEQUENCES</p>				
		SEQUENCE NAME	USER	SCHEDULE DESC	FREQ	PRIORITY
		INCOME STAT'T ANALYSIS ▼	LS	ISA FOR DEC '00	IMMEDIATE ▼	ADD
		SELECT SEQUENCE TO VIEW				
		COST CENTER SCORING - PTD VARIANCE ▼				
		VIEW				

09925125 040802

FIG. 15S

1540

SCHEDULE SEQUENCES				
SEQUENCE NAME	USER	SCHEDULE DESC	FREQ	PRIORITY
INCOME STAT'T ANALYSIS ▼	LS	ISA FOR DEC '00	IMMEDIATE ▼	ADD
SELECT SEQUENCE TO VIEW				
IMMEDIATE				
ONCE				
EXTRACT				
DAILY				
WEEKLY				
MONTHLY				
COST CENTER SCORING - PTD VARIANCE ▼				

FIG. 15T

1542

ADD SEQUENCE TO SCHEDULE	
SELECT THE DAYS YOU WISH THE SEQUENCE TO RUN	
<input type="checkbox"/> SUNDAY <input type="checkbox"/> MONDAY <input type="checkbox"/> TUESDAY <input type="checkbox"/> WED <input type="checkbox"/> THURS <input type="checkbox"/> FRIDAY <input type="checkbox"/> SATURDAY	
START AT	
8 ▼	30 ▼ PM ▼
NEXT START DATE	
2000 ▼	DEC ▼ 15 ▼
SUBMIT	

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FIG. 15U

SELECT SOURCE INFORMATION		SCHEDULE ENTRY	
SEQUENCE: INCOME STATEMENT ANALYSIS			
STEP: 1			
QUERY: NEW QUERY			
SOURCE NAME	DV	<input type="button" value="▼"/>	
	DV	PART	
<div>CONTINUE</div>			

1544

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FIG. 15V

SELECT SOURCE INFORMATION		SCHEDULE ENTRY	
SEQUENCE: INCOME STATEMENT ANALYSIS			
STEP: 1			
QUERY: NEW QUERY			
SOURCE NAME		PART	
SOURCE SET	OAS ▼		
CONTINUE			

1546

09925125.040802

FIG. 15W

1548

SEQUENCE: INCOME STATEMENT ANALYSIS

SCHEDULE: INCOME STATEMENT ANALYSIS FOR DECEMBER 2000

SEQUENCE STEP: 1

NEW QUERY

TABLE NAME	COL NAME	OP	FILTER VALUE		
BUDGET_D	BUDGET	IN	<div>ACTUAL</div> <div>CORPORATE 1997</div> <div></div>	<div>MOD</div> <div>MOD</div> <div>ADD</div>	<div>DEL</div>
	PERIOD_D	=	<div>DEC-2000</div>	<div>MOD</div>	

IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD, MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED

FINISHED

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FIG. 15X

1550

SEQUENCE OUTPUT PRIVILEGES

GROUPS

SEQSCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000

USER	ACCESS	FORMAT	ST	CS	RESULT TAG	RESULT VALUE	OPT
NEILB ▼	EMAIL_DATA ▼	HTML ▼	▼				ADD
NEILB	LARRY	ERICH	MARC	SALES	MARKET	HQ	

IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD, MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED

FINISHED

09925125 040802

FIG. 15Y

1552

SEQUENCE OUTPUT PRIVILEGES

GROUPS

SEQSCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000

USER	ACCESS	FORMAT	ST	CS	RESULT TAG	RESULT VALUE	OPT
NEILB ▼	EMAIL_DATA ▼	HTML ▼	▼				ADD
<div>EMAIL_DATA EMAIL_URL WEB DESK_ALERT</div>							

IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD,
MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED

FINISHED

09925125, 040302

FIG. 15Z

1554

SEQUENCE OUTPUT PRIVILEGES

GROUPS

SEQSCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000

USER	ACCESS	FORMAT	ST	CSS RESULT TAG	RESULT VALUE	OPT
NEILB	EMAIL_DATA	HTML		3		ADD

1

2

HTML
WAP
XML
EXCEL
PALM VII
PALM MAIL

IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD,
MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED

FINISHED

09925125, 040802

FIG. 15AA

SEQUENCE OUTPUT PRIVILEGES

SEQSCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000

CONDITION SUBSEQUENCE	RESULT TAG	RESULT VALUES
<div>SUBSEQUENCE 2</div>	<div>SELECT DESIRED TAG</div> <div>SELECT DESIRED TAG NO RESULT TAG NEEDED DEPARTMENT LINE_NAME PTD_ACTUAL PTD_BUDGET PTD_VARIANCE</div>	<div></div>

FINISHED

1556

09925125, 040802

FIG. 15BB

1558

SEQUENCED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000

SELECT

<VAL>

☐ MAINTENANCE<NAL>

<VAL>

☐ MANUFACTURING<NAL>

<VAL>

☐ MANUFACTURING PLANT 1<NAL>

<VAL>

☐ MANUFACTURING PLANT 2<NAL>

<VAL>

☐ MARKETING<NAL>

<VAL>

☒ NON-PRODUCT SALES<NAL>

<VAL>

☐ ORDER ENTRY<NAL>

<VAL>

☐ PARENT TOTAL<NAL>

<VAL>

☐ PAYROLL<NAL>

<VAL>

☒ PRODUCT SALES<NAL>

<VAL>

☐ </SPLIT VALUES>

FINISHED

09925125 040807

FIG. 15CC

1560

SEQUENCE OUTPUT PRIVILEGES		
SEQSCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000		
CONDITION SUBSEQUENCE	RESULT TAG	RESULT VALUES
SUBSEQUENCE 2 ▼	DEPARTMENT ▼	<div><?XML VERSION = "1.0"?> <SPLIT VALUES> <VAL>COMMERCIAL SALES<NAL> <VAL? COMMUNICATIONS RESOURCES<NAL> <VAL>EAST REGION SALES<NAL> <VAL>FINANCES<NAL> <VAL>GOVERNMENT SALES<NAL> <VAL>NON-PRODUCT SALES<NAL> <VAL>PRODUCT SALES<NAL> </SPLIT VALUES></div>
FINISHED		

09925125 040002

FIG. 15DD

1562

SEQUENCE OUTPUT PRIVILEGES							GROUPS
SEQSCHED: 1815 INCOME STATEMENT ANALYSIS FOR DECEMBER 2000							
USER	ACCESS	FORMAT	ST	CSS RESULT TAG	RESULT VALUE	OPT	
NEILB ▼	EMAIL_DATA ▼	HTML ▼	▼	3		ADD	
NEILB	EMAIL_DATA ▼	HTML ▼	2 ▼	2	DEPARTME	MOD	
						DEL	
IF YOU HAVE MADE CHANGES AND NOT SUBMITTED THEM USING THE ADD, MOD, OR DEL BUTTONS, THEY WILL NOT BE COMMITTED							
FINISHED							

09925125, 040802

FIG. 15EE

1564

SCHEDULE SEQUENCES				
SEQUENCE NAME	USER	SCHEDULE DESC	FREQ	PRIORITY
TEST SEQUENCE FOR PRIV	LS		IMMEDIATE	ADD
SELECT SEQUENCE TO VIEW				
TEST SEQUENCE FOR PRIVS AND STEPS		VIEW		
TEST SEQUENCE FOR PRIVS AND STEPS COST CENTER SCORING - PTD COST CENTER SCORING - PTD VARIANCE TEST VOAGE AR - PTD REVUENUE BY DEPARTMENT SOCCER SCORES BUDGET VARIANCE SCORING INCOME STATEMENT ANALYSIS				

000025125, 040802

FIG. 15FF

1566

SCHEDULE SEQUENCES					
SEQUENCE NAME	USER	SCHEDULE DESC	FREQ	PRIORITY	
TEST SEQUENCE FOR PRIV	LS		IMMEDIATE	ADD	
SELECT SEQUENCE TO VIEW					
TEST SEQUENCE FOR PRIVS AND STEPS			VIEW		
SEQUENCE: INCOME STATEMENT ANALYSIS USER: NB					
ID	DESCRIPTION	STATUS	FREQ	START	OPTIONS
1815	INCOME STAT'T ANALYSIS DEC 2001	SCHED	DAILY	23-APR-2001 08:30 PM	MOD DEL PRIVILEGES

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FIG. 16A

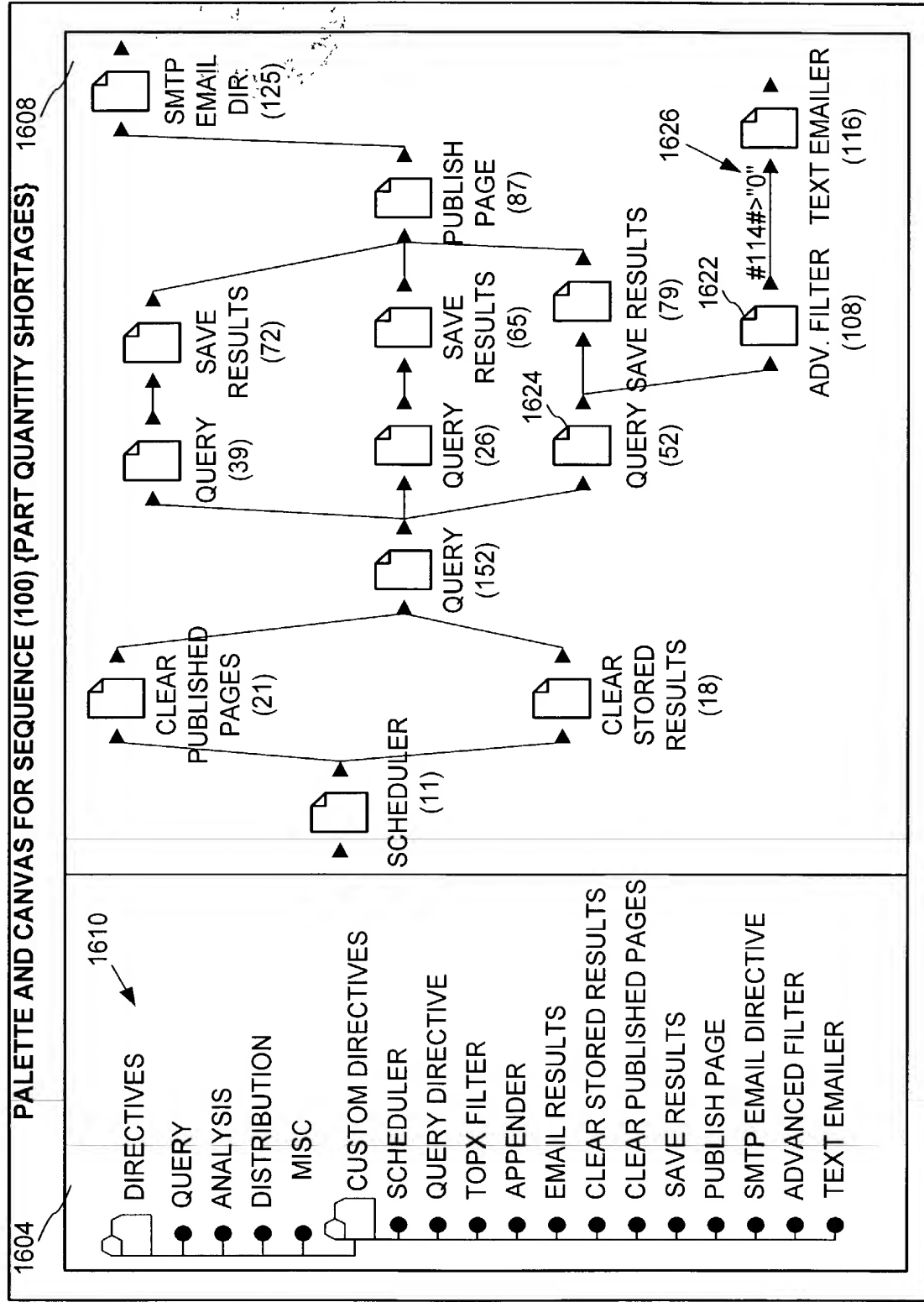


FIG. 16B

1630

SEQUENCE PROPERTIES

X

SEQUENCE NAME:
DESCRIPTION:
NOTES:

PART QUANTITY SHORTAGES

FINDS PART QUANTITY SHORTAGES

SAVE THIS ONE

SEQUENCE AUTHOR:
SEQUENCE STATUS:

AUTHOR1

STATUS1

GLOBAL VARIABLES:

CAPTION:
VALUE:

CONNECT STRING

JDBC:ORACLE.THIN@123.245.23.1:1521:CONNECT30

NAME: CONNECT_STRING

CAPTION:
VALUE:

DATABASE USER NAME

RRIC1234

NAME: USER_NAME

CAPTION:
VALUE:

DATABASE PASSWORD

SEQUENCE

NAME: USER_PWD

CAPTION:
VALUE:

OWNERNAME

QRY_ANALYSIS

NAME: OWNERNAME

CAPTION:
VALUE:

CURRENT PERIOD

('1997-09) SEP-97

NAME: CURPERIOD

OK

CANCEL

ADD VARIABLE

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FIG. 16C

1660

DIRECTIVE PROPERTIES

X

ID: 108 DIRECTIVE NAME: (ADFILTER) ADVANCED FILTER

ACTIVITY

INPUT

INPUT

INPUT

PARAM NAME (FILTER_EXP) FILTER EXPRESSION

#REQUIRED_QUANTITY# >200

DB3(52) RESULT DATA

OK

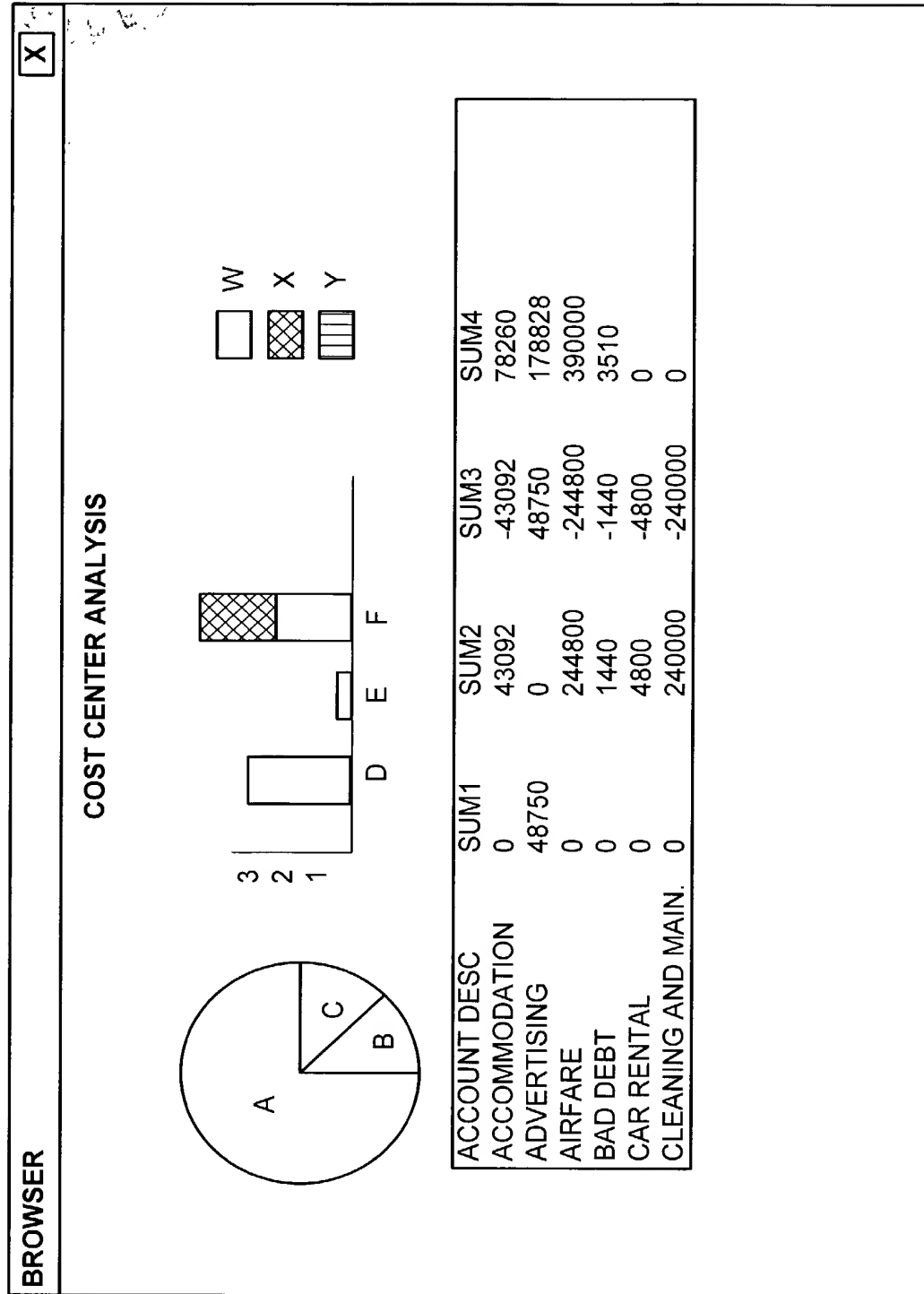
CANCEL

09925125.040802

FIG. 17

Gregory L. Maurer, Esq., Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, Oregon 97204, (503) 226-7391, Inventor: Scheurich et al., Title: SYSTEMS AND METHODS FOR GENERATING INFORMATION FROM A DATA COLLECTION TO SUPPORT DECISION-MAKING, Application No. 09/925,125, Filed: August 9, 2001, Attorney Docket No.: 6115-58351, Page 56 of 103

1702



09925125, 040902

FIG. 18

1801

```
<DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="DB2" DIRECTIVE_NAME="DATA
DIRECTIVE" THREADING_EFFECT="SPLIT" DIRECTIVE_DESC="SQL
DATADIRECTIVE THAT SPLITS RESULTS ON GIVEN COLUMN"
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070"/>
  <IN_PARAMETERS>
    <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SQL"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SQL"/>
    <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="COLUMN TO SPLIT"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SPLIT_COLUMN"/>
    <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="CONNECTION
STRING" PARAM_DATA_TYPE="STRING"
PARAM_NAME="CONNECTION_STRING"/>
    <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE USER
NAME" PARAM_DATA_TYPE="STRING" PARAM_NAME="USERNAME"/>
    <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE
PASSWORD" PARAM_DATA_TYPE="STRING" PARAM_NAME="PWD"/>
  </IN_PARAMETERS>
  <OUT_PARAMETERS>
    <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET"/>
    <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT
METADATA" PARAM_DATA_TYPE="STRING"
PARAM_NAME="RESULTMETADATA"/>
    <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="SPLIT VALUE"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SPLITVALUE"/>
  </OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
```



FIG. 19A

1901

```
- <DF_DIRECTIVE_DEFINITION_LIST>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="SB1"
  DIRECTIVE_NAME="SCHEDULER" DIRECTIVE_CATEGORY="DPA-MISC"
  THREADING_EFFECT="SPLIT" DIRECTIVE_DESC="SCHEDULE DIRECTIVE"
  DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1">
- <!-- CAN ADD A TYPE OR ICON NAME
-->
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="FREQUENCY"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="FREQUENCY" />
  </IN_PARAMETERS>
  <OUT_PARAMETERS />
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
  </DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="DB2" DIRECTIVE_NAME="DATA
  DIRECTIVE" THREADING_EFFECT="SPLIT" DIRECTIVE_DESC="SQL
  DATADIRECTIVE THAT SPLITS RESULTS ON GIVEN COLUMN"
  DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
  DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SQL"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SQL" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="COLUMN TO SPLIT"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SPLIT_COLUMN" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="CONNECTION STRING"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="CONNECTION_STRING" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE USER NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="USERNAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE PASSWORD"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PWD" />
  </IN_PARAMETERS>
```

FIG. 19B

1902

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT METADATA"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="SPLIT VALUE"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SPLITVALUE" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="AB1" DIRECTIVE_NAME="TOPX
FILTER" THREADING_EFFECT="STANDARD" DIRECTIVE_DESC="FILTER OUT TOP
X ROWS FROM RESULTSET" DIRECTIVE_VENDOR="DPA"
DIRECTIVE_VERSION="1" DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET METADATA"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="COLUMN POSITION FOR
TOPX" PARAM_DATA_TYPE="STRING" PARAM_NAME="TOPX_COLUMN" />
</IN_PARAMETERS>
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT METADATA"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="AB2"
DIRECTIVE_NAME="APPENDER" DIRECTIVE_TYPE=""
THREADING_EFFECT="JOIN" DIRECTIVE_DESC="REJOIN SPLIT RESULTSETS"
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET METADATA"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
</IN_PARAMETERS>
```

FIG. 19C

1903

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="MB1" DIRECTIVE_NAME="EMAIL
RESULTS" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
DIRECTIVE_DESC="SIMPLE EMAIL DIRECTIVE" DIRECTIVE_VENDOR="DPA"
DIRECTIVE_VERSION="1" DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL ADDRESS LIST"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="MAILADR" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SUBJECT LINE"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SUBJECT" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="MESSAGE DATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="MESSAGE" />
</IN_PARAMETERS>
<OUT_PARAMETERS />
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="CRB1"
DIRECTIVE_NAME="CLEAR STORED RESULTS"
THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
DIRECTIVE_DESC="REMOVE PREVIOUS RESULT SETS FROM REPOSITORY"
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="OWNER ID"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNERID" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTNAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTNAME" />
</IN_PARAMETERS>
<OUT_PARAMETERS />
</DF_DIRECTIVE_DEFINITION>
```

FIG. 19D

1904

```
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="CRC1" DIRECTIVE_NAME="CLEAR
PUBLISHED PAGES" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
DIRECTIVE_DESC="REMOVE PREVIOUS PUBLISHED PAGES FROM
REPOSITORY" DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="OWNERID"
PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNERID" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE NAME"
PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGENAME" />
</IN_PARAMETERS>
<OUT_PARAMETERS />
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="SR1" DIRECTIVE_NAME="SAVE
RESULTS" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
DIRECTIVE_DESC="SAVES RESULTS TO REPOSITORY"
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET OWNER"
PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNER" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET METADATA"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULT SET NAME"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTNAME" />
</IN_PARAMETERS>
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULTSET ID"
PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSETID" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
```

FIG. 19E

1905

```
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="CR2" DIRECTIVE_NAME="PUBLISH
PAGE" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
DIRECTIVE_DESC="PUBLISHES PAGE & GRANTS SECURITY"
DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="GRANT SECURITY LIST"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SECDOC" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="METADATA FOR SECDOC"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SECMETA" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="GRANT SECURITY LIST"
PARAM_DATA_TYPE="STRING" PARAM_NAME="SECCOLNAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE OWNER"
PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNER" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE NAME"
PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGENAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE SLICE NAME"
PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGESLICENAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE DEFINITION"
PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGEDEFN" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P1" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P2" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P3" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P4" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P5" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="IN RESULTS KEY"
PARAM_DATA_TYPE="STRING" PARAM_NAME="P6" />
</IN_PARAMETERS>
```

FIG. 19F

1906

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="PAGE ID"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGEID" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="PAGE OWNER"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNER" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="PAGE NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGENAME" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="PAGE SLICE NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGESLICENAME" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="DB3" DIRECTIVE_NAME="DATA
DIRECTIVE" THREADING_EFFECT="STANDARD" DIRECTIVE_DESC="RETRIEVE
DATA AND ASSEMBLE INTO RESULT SET" DIRECTIVE_VENDOR="DPA"
DIRECTIVE_VERSION="1" DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SQL"
  PARAM_DATA_TYPE="PARAMETERIZED SQL STRING" PARAM_NAME="SQL" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="CONNECTION STRING"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="CONNECTION_STRING" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE USER NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="USERNAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="DATABASE PASSWORD"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PWD" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P1"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P1" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P2"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P2" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P3"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P3" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P4"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P4" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="P5"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="P5" />
</IN_PARAMETERS>
```

FIG. 19G

1907

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT DATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSET" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULT METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTMETADATA" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="MB2" DIRECTIVE_NAME="SMTP
EMAIL DIRECTIVE" THREADING_EFFECT="STANDARD" DIRECTIVE_TYPE=""
DIRECTIVE_DESC="SEND PUBLISHED PAGES" DIRECTIVE_VENDOR="DPA"
DIRECTIVE_VERSION="1" DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL ADDRESSES"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ADDRDOC" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="METADATA FOR
ADDRDOC" PARAM_DATA_TYPE="STRING" PARAM_NAME="ADDRMETA" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL COLUMN NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ADDRCOLNAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL COLUMN NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="IDCOLNAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SUBJECT"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SUBJECT" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE OWNER"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="OWNER" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE NAME"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGENAME" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="PAGE INSTANCE"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="PAGEINST" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="MAIL FORMAT"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="FORMAT" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SEND FROM MAIL
ADDRESS" PARAM_DATA_TYPE="STRING" PARAM_NAME="SENDFROM" />
</IN_PARAMETERS>
```



FIG. 19H

1908

```
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="ERROR MESSAGES"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ERROR_MSG" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="ABFILTER"
  DIRECTIVE_NAME="ADVANCED FILTER" THREADING_EFFECT="STANDARD"
  DIRECTIVE_TYPE="" DIRECTIVE_DESC="FILTER RESULTS"
  DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
  DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="FILTER EXPRESSION"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="FILTER_EXP" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTS METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="METADOC" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTS"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSDOC" />
</IN_PARAMETERS>
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULTS METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="METADOC" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="RESULTS"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSDOC" />
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="ROW COUNT"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ROWCOUNT" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
- <DF_DIRECTIVE_DEFINITION DIRECTIVE_ID="TEXTEMAILER"
  DIRECTIVE_NAME="TEXT EMAILER" THREADING_EFFECT="STANDARD"
  DIRECTIVE_TYPE="" DIRECTIVE_DESC="TEXT EMAILER"
  DIRECTIVE_VENDOR="DPA" DIRECTIVE_VERSION="1"
  DIRECTIVE_CATEGORY="DPA-MISC">
  <DEPLOYMENT SERVICE="DPA_DIRECTIVE_MGR" MACHINE="SKUNKNT4"
  PORT="9070" />
```

FIG. 19I

1909

```
- <IN_PARAMETERS>
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SUBJECT EXPRESSION"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="SUBJECT_EXP" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="MESSAGE EXPRESSION"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="MESSAGE_EXP" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="EMAIL ADDRESSES"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="EMAIL_ADDRESSES" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="SEND FROM ADDRESS"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="FROM_ADDRESS" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTS METADATA"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="METADOC" />
  <PARAMETER PARAM_TYPE="IN" PARAM_CAPTION="RESULTS"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="RESULTSDOC" />
</IN_PARAMETERS>
- <OUT_PARAMETERS>
  <PARAMETER PARAM_TYPE="OUT" PARAM_CAPTION="ERROR MESSAGES"
  PARAM_DATA_TYPE="STRING" PARAM_NAME="ERROR" />
</OUT_PARAMETERS>
</DF_DIRECTIVE_DEFINITION>
</DF_DIRECTIVE_DEFINITION_LIST>
```

FIG. 20A

2001

```
- <RESULTS_DOC>
- <DP_QUERY_DEF VERSION="1">
  <DPA_IDENTIFIERS DATA_SET="NW" WH_OWNER_NAME="RROC" />
  <HINTS />
- <COLUMN_DEFS>
  <COLUMN_DEF COLUMN_SORT_ATTRIBUTE="NONE"
  COLUMN_TEXT="VENDOR_NAME" TABLE_ALIAS="VENDOR_D"
  COLUMN_NAME="VENDOR_NAME" COLUMN_ALIAS="VENDOR_NAME"
  COLUMN_SORT_ORDER="1" COLUMN_POSITION="1"
  COLUMN_TYPE="GROUP_BY" />
  <COLUMN_DEF COLUMN_SORT_ATTRIBUTE="NONE"
  COLUMN_TEXT="PERIOD_KEY" TABLE_ALIAS="AP_INV_DETAIL_F"
  COLUMN_NAME="PERIOD_KEY" COLUMN_ALIAS="PERIOD_KEY"
  COLUMN_SORT_ORDER="2" COLUMN_POSITION="2"
  COLUMN_TYPE="GROUP_BY" />
  <COLUMN_DEF COLUMN_SORT_ATTRIBUTE="DESC"
  COLUMN_TEXT="SUM(AP_INV_DETAIL_F.INVOICE_LINE_AMOUNT)"
  TABLE_ALIAS="AP_INV_DETAIL_F"
  COLUMN_NAME="INVOICE_LINE_AMOUNT"
  COLUMN_ALIAS="SUM_INVOICE_LINE_AMOUNT"
  COLUMN_SORT_ORDER="3" COLUMN_POSITION="3"
  COLUMN_TYPE="AGGREGATE" />
</COLUMN_DEFS>
- <TABLE_DEFS>
  <TABLE_DEF TABLE_ALIAS="AP_INV_DETAIL_F"
  TABLE_NAME="AP_INV_DETAIL_F" />
  <TABLE_DEF TABLE_ALIAS="VENDOR_D" TABLE_NAME="VENDOR_D" /
  >
</TABLE_DEFS>
- <DETAIL_FILTERS>
- <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="VENDOR_TYPE"
  TABLE_ALIAS="VENDOR_D" FILTER_PREC_OPER="AND"
  FILTER_OPERATOR="=">
  <FILTER_VALUE VALUE_DATA_TYPE="STRING">EMPLOYEE</
  FILTER_VALUE>
</FILTER>
```

FIG. 20B

2002

```
- <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="COMPANY_KEY"
TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
FILTER_OPERATOR="=">
  <FILTER_VALUE VALUE_DATA_TYPE="STRING">01</FILTER_VALUE>
</FILTER>
</DETAIL_FILTERS>
- <AGGREGATE_FILTERS>
- <FILTER FILTER_TYPE="VALUE"
COLUMN_TEXT="SUM(INVOICE_LINE_AMOUNT)"
TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
FILTER_OPERATOR=">">
  <FILTER_VALUE VALUE_DATA_TYPE="NUMBER">0</FILTER_VALUE>
</FILTER>
</AGGREGATE_FILTERS>
</DP_QUERY_DEF>
<DPA_QUERY_SERVER_INFO SERVICE="DPA_QUERY_SERVER"
MACHINE="EXH_2K" PORT="8069"
WAREHOUSE_SERVER="HD.DPAPPLICATIONS.COM"
WAREHOUSE_DBNAME="DEMO30"
WAREHOUSE_OWNER="RROC">FOODADDY</
DPA_QUERY_SERVER_INFO>
- <DP_DS_METADATA>
  <DP_COLUMN COLUMN_NAME="VENDOR_NAME"
COLUMN_DATA_TYPE="VARCHAR2" COLUMN_DS_ALIAS="C1"
COLUMN_TYPE="GROUP_BY" COLUMN_SORT_ATTRIBUTE="NONE"
COLUMN_SOURCE_ALIAS="VENDOR_NAME"
COLUMN_LABEL="VENDOR NAME" COLUMN_DESC=""
COLUMN_IS_CURRENCY="N" />
  <DP_COLUMN COLUMN_NAME="PERIOD_KEY"
COLUMN_DATA_TYPE="VARCHAR2" COLUMN_DS_ALIAS="C2"
COLUMN_TYPE="GROUP_BY" COLUMN_SORT_ATTRIBUTE="NONE"
COLUMN_SOURCE_ALIAS="PERIOD_KEY" COLUMN_LABEL="PERIOD
KEY" COLUMN_DESC="" COLUMN_IS_CURRENCY="N" />
  <DP_COLUMN COLUMN_NAME="SUM_INVOICE_LINE_AMOUNT"
COLUMN_DATA_TYPE="NUMBER" COLUMN_DS_ALIAS="C3"
COLUMN_TYPE="AGGREGATE" COLUMN_SORT_ATTRIBUTE="DESC"
COLUMN_SOURCE_ALIAS="SUM_INVOICE_LINE_AMOUNT"
COLUMN_LABEL="INVOICE LINE AMOUNT" COLUMN_DESC=""
COLUMN_IS_CURRENCY="Y" />
```

FIG. 20C

2003

```
</DP_DS_METADATA>
- <DP_DS>
- <R>
  <C1>JAMIE FROST</C1>
  <C2>DEC-97</C2>
  <C3>28159</C3>
</R>
- <R>
  <C1>JAMIE FROST</C1>
  <C2>JAN-98</C2>
  <C3>15114.76</C3>
</R>
- <R>
  <C1>JAMIE FROST</C1>
  <C2>FEB-98</C2>
  <C3>4417.86</C3>
</R>
- <R>
  <C1>KERRY JONES</C1>
  <C2>APR-98</C2>
  <C3>3439.10</C3>
</R>
- <R>
  <C1>KERRY JONES</C1>
  <C2>DEC-97</C2>
  <C3>3263</C3>
</R>
- <R>
  <C1>JAMIE FROST</C1>
  <C2>NOV-97</C2>
  <C3>2907.85</C3>
</R>
- <R>
  <C1>KERRY JONES</C1>
  <C2>FEB-98</C2>
  <C3>2799.31</C3>
</R>
```

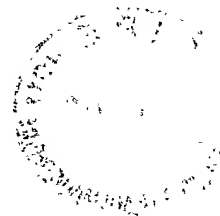


FIG. 20D

2004

- <R>
 <C1>KERRY JONES</C1>
 <C2>MAY-98</C2>
 <C3>2698.64</C3>
 </R>
- <R>
 <C1>JAMIE FROST</C1>
 <C2>APR-98</C2>
 <C3>2657.20</C3>
 </R>
- <R>
 <C1>JAMIE FROST</C1>
 <C2>MAY-98</C2>
 <C3>2549.68</C3>
 </R>
- <R>
 <C1>KERRY JONES</C1>
 <C2>MAR-98</C2>
 <C3>2511.98</C3>
 </R>
- <R>
 <C1>JAMIE FROST</C1>
 <C2>MAR-98</C2>
 <C3>2459.87</C3>
 </R>
- <R>
 <C1>JAMIE FROST</C1>
 <C2>JUN-98</C2>
 <C3>2219.90</C3>
 </R>
- <R>
 <C1>KERRY JONES</C1>
 <C2>JUN-98</C2>
 <C3>2182.29</C3>
 </R>
- <R>
 <C1>KERRY JONES</C1>
 <C2>JAN-98</C2>
 <C3>1516</C3>
 </R>



FIG. 20E

- <R>
<C1>BLACK, CHRIS</C1>
<C2>NOV-97</C2>
<C3>651.06</C3>
</R>
</DP_DS>
</RESULTS_DOC>



2005
↖



FIG. 21A

2101

```
- <DF_WORKFLOW_VERSION="1">
  <DF_WORKFLOW_HEADER DF_EDITOR_MAX_ID="172" FLOW_NAME="QTY
ANALYSIS" FLOW_DESCRIPTION="QTY ANALYSIS FLOW" FLOW_STATUS="FLOW
STATUS" FLOW_NOTES="" FLOW_AUTHOR="FLOW AUTHOR" />
- <DF_WORKFLOW_PARAMETERS>
- <PARAMETER_NODE_ID="13" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CONNECT STRING" PARAM_NAME="CONNECT_STRING"
PARAM_TYPE="OUT">
  <PARAM_SOURCE
PARAM_TYPE="VALUE">JDBC:ORACLE:THIN:@172.16.1.34:1521:DEMO30</
PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER_NODE_ID="14" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USER_NAME"
PARAM_TYPE="OUT">
  <PARAM_SOURCE PARAM_TYPE="VALUE">RROC609</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER_NODE_ID="15" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="USER_PWD"
PARAM_TYPE="OUT">
  <PARAM_SOURCE PARAM_TYPE="VALUE">DPA</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER_NODE_ID="16" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="OWNERNAME" PARAM_NAME="OWNERNAME"
PARAM_TYPE="OUT">
  <PARAM_SOURCE PARAM_TYPE="VALUE">QTY_ANALYSIS</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER_NODE_ID="17" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CURRENT PERIOD" PARAM_NAME="CURRPERIOD"
PARAM_TYPE="OUT">
  <PARAM_SOURCE PARAM_TYPE="VALUE">(1997-09) SEP-97</
PARAM_SOURCE>
  </PARAMETER>
</DF_WORKFLOW_PARAMETERS>
- <DF_WORKFLOW_ACTIVITIES>
- <ACTIVITY_NODE_ID="11">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="SCHEDULER" THREADING_EFFECT="SPLIT"
DIRECTIVE_ID="SB1" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="SCHEDULE
DIRECTIVE" />
```

FIG. 21B

2102

```
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="12" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="FREQUENCY" PARAM_NAME="FREQUENCY"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">0</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
<ACTIVITY_OUT_PARAMETERS />
</ACTIVITY>
- <ACTIVITY_NODE_ID="18">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="CLEAR STORED RESULTS"
THREADING_EFFECT="STANDARD" DIRECTIVE_ID="CRB1" DIRECTIVE_TYPE=""
DIRECTIVE_VERSION="1" DIRECTIVE_DESC="REMOVE PREVIOUS RESULT SETS
FROM REPOSITORY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="19" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="OWNER ID" PARAM_NAME="OWNERID" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="20" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTNAME" PARAM_NAME="RESULTNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">*</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
<ACTIVITY_OUT_PARAMETERS />
</ACTIVITY>
- <ACTIVITY_NODE_ID="21">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="CLEAR PUBLISHED PAGES"
THREADING_EFFECT="STANDARD" DIRECTIVE_ID="CRC1" DIRECTIVE_TYPE=""
DIRECTIVE_VERSION="1" DIRECTIVE_DESC="REMOVE PREVIOUS PUBLISHED
PAGES FROM REPOSITORY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="22" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="OWNERID" PARAM_NAME="OWNERID" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21C

2103

```
- <PARAMETER NODE_ID="23" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE NAME" PARAM_NAME="PAGENAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">*</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
<ACTIVITY_OUT_PARAMETERS />
</ACTIVITY>
- <ACTIVITY NODE_ID="26">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="DETAIL QUERY" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="DATA DIRECTIVE" THREADING_EFFECT="STANDARD"
DIRECTIVE_ID="DB3" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="RETRIEVE
DATA AND ASSEMBLE INTO RESULT SET" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="27" PARAM_DATA_TYPE="PARAMETERIZED SQL
STRING" PARAM_CAPTION="SQL" PARAM_NAME="SQL" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">SELECT
NW_COMPONENT_ITEM_D.COMPONENT_ITEM_DESC
COMPONENT_ITEM_DESC,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ISSUED)
QUANTITY_ISSUED,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ON_HAND)
QUANTITY_ON_HAND,SUM(NW_DISC_SHORTAGE_F.QUANTITY_SHORT)
QUANTITY_SHORT,SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY)
REQUIRED_QUANTITY FROM NW_COMPONENT_ITEM_D_0
NW_COMPONENT_ITEM_D,NW_DISC_SHORTAGE_F_0
NW_DISC_SHORTAGE_F,NW_ORG_PERIOD_D_0
NW_ORG_PERIOD_D,NW_WIP_ENTITY_D_0 NW_WIP_ENTITY_D WHERE
NW_DISC_SHORTAGE_F.COMPONENT_ITEM_KEY =
NW_COMPONENT_ITEM_D.COMPONENT_ITEM_KEY AND
NW_DISC_SHORTAGE_F.ORG_PERIOD_KEY =
NW_ORG_PERIOD_D.ORG_PERIOD_KEY AND
NW_DISC_SHORTAGE_F.WIP_ENTITY_KEY
=NW_WIP_ENTITY_D.WIP_ENTITY_KEY AND NW_ORG_PERIOD_D.ORG_PERIOD
= '#P1#' GROUP BY NW_COMPONENT_ITEM_D.COMPONENT_ITEM_DESC
HAVING SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY) > 0 ORDER BY
REQUIRED_QUANTITY DESC, COMPONENT_ITEM_DESC,REQUIRED_QUANTITY,
QUANTITY_ISSUED, QUANTITY_SHORT, QUANTITY_ON_HAND</
PARAM_SOURCE>
</PARAMETER>
```

FIG. 21D

2104

```
- <PARAMETER NODE_ID="28" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CONNECTION STRING"
PARAM_NAME="CONNECTION_STRING" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="29" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USERNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">14</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="30" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="PWD"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">15</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="31" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P1" PARAM_NAME="P1" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">17</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="32" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P2" PARAM_NAME="P2" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="33" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P3" PARAM_NAME="P3" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="34" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P4" PARAM_NAME="P4" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="35" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P5" PARAM_NAME="P5" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
```



FIG. 21E

2105

```
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="36" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT DATA" PARAM_NAME="RESULTSET"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="37" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="39">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="TREND QUERY" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="DATA DIRECTIVE" THREADING_EFFECT="STANDARD"
DIRECTIVE_ID="DB3" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="RETRIEVE
DATA AND ASSEMBLE INTO RESULT SET" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="40" PARAM_DATA_TYPE="PARAMETERIZED SQL
STRING" PARAM_CAPTION="SQL" PARAM_NAME="SQL" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">SELECT
NW_ORG_PERIOD_D.ORG_PERIOD
PERIOD_NAME,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ISSUED)
QUANTITY_ISSUED,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ON_HAND)
QUANTITY_ON_HAND,SUM(NW_DISC_SHORTAGE_F.QUANTITY_SHORT)
QUANTITY_SHORT,SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY)
REQUIRED_QUANTITY FROM NW_DISC_SHORTAGE_F_0
NW_DISC_SHORTAGE_F, NW_ORG_PERIOD_D_0 NW_ORG_PERIOD_D WHERE
NW_DISC_SHORTAGE_F.ORG_PERIOD_KEY =
NW_ORG_PERIOD_D.ORG_PERIOD_KEY GROUP BY
NW_ORG_PERIOD_D.ORG_PERIOD ORDER BY PERIOD_NAME DESC</
PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="41" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CONNECTION STRING"
PARAM_NAME="CONNECTION_STRING" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21F

2106

```
- <PARAMETER NODE_ID="42" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USERNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">14</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="43" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="PWD"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">15</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="44" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P1" PARAM_NAME="P1" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">17</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="45" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P2" PARAM_NAME="P2" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="46" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P3" PARAM_NAME="P3" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="47" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P4" PARAM_NAME="P4" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="48" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P5" PARAM_NAME="P5" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="49" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT DATA" PARAM_NAME="RESULTSET"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="50" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
```

FIG. 21G

2107

```
- <ACTIVITY NODE_ID="52">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="SUMMARY QUERY" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
DIRECTIVE_NAME="DATA DIRECTIVE" THREADING_EFFECT="STANDARD"
DIRECTIVE_ID="DB3" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="RETRIEVE
DATA AND ASSEMBLE INTO RESULT SET" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="53" PARAM_DATA_TYPE="PARAMETERIZED SQL
STRING" PARAM_CAPTION="SQL" PARAM_NAME="SQL" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">SELECT
NW_COMPONENT_ITEM_D.COMPONENT_ITEM_DESC
COMPONENT_ITEM_DESC,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ISSUED)
QUANTITY_ISSUED,SUM(NW_DISC_SHORTAGE_F.QUANTITY_ON_HAND)
QUANTITY_ON_HAND,SUM(NW_DISC_SHORTAGE_F.QUANTITY_SHORT)
QUANTITY_SHORT,SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY)
REQUIRED_QUANTITY FROM NW_COMPONENT_ITEM_D_0
NW_COMPONENT_ITEM_D,NW_DISC_SHORTAGE_F_0
NW_DISC_SHORTAGE_F,NW_ORG_PERIOD_D_0
NW_ORG_PERIOD_D,NW_WIP_ENTITY_D_0 NW_WIP_ENTITY_D WHERE
NW_DISC_SHORTAGE_F.COMPONENT_ITEM_KEY =
NW_COMPONENT_ITEM_D.COMPONENT_ITEM_KEY AND
NW_DISC_SHORTAGE_F.ORG_PERIOD_KEY =
NW_ORG_PERIOD_D.ORG_PERIOD_KEY AND
NW_DISC_SHORTAGE_F.WIP_ENTITY_KEY
=NW_WIP_ENTITY_D.WIP_ENTITY_KEY AND NW_ORG_PERIOD_D.ORG_PERIOD
= '#P1#' GROUP BY NW_COMPONENT_ITEM_D.COMPONENT_ITEM_DESC
HAVING SUM(NW_DISC_SHORTAGE_F.REQUIRED_QUANTITY) > 0 ORDER BY
REQUIRED_QUANTITY DESC, COMPONENT_ITEM_DESC,REQUIRED_QUANTITY,
QUANTITY_ISSUED, QUANTITY_SHORT, QUANTITY_ON_HAND</
PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="54" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CONNECTION STRING"
PARAM_NAME="CONNECTION_STRING" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="55" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USERNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">14</PARAM_SOURCE>
  </PARAMETER>
```

FIG. 21H

2108

```
- <PARAMETER NODE_ID="56" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="PWD"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">15</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="57" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P1" PARAM_NAME="P1" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">17</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="58" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P2" PARAM_NAME="P2" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="59" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P3" PARAM_NAME="P3" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="60" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P4" PARAM_NAME="P4" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="61" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P5" PARAM_NAME="P5" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="62" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT DATA" PARAM_NAME="RESULTSET"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="63" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
```

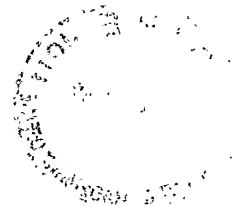


FIG. 21I

2109

```
- <ACTIVITY_NODE_ID="65">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
  ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
  THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="SAVE RESULTS"
  DIRECTIVE_ID="SR1" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
  DIRECTIVE_DESC="SAVES RESULTS TO REPOSITORY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER_NODE_ID="66" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULT SET OWNER" PARAM_NAME="OWNER"
  PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER_NODE_ID="67" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULT SET" PARAM_NAME="RESULTSET"
  PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">36</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER_NODE_ID="68" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULT SET METADATA"
  PARAM_NAME="RESULTMETADATA" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">37</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER_NODE_ID="69" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULT SET NAME" PARAM_NAME="RESULTNAME"
  PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">DETAIL</PARAM_SOURCE>
  </PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER_NODE_ID="70" PARAM_DATA_TYPE="STRING"
  PARAM_CAPTION="RESULTSET ID" PARAM_NAME="RESULTSETID"
  PARAM_TYPE="OUT">
  <PARAM_SOURCE />
  </PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY_NODE_ID="72">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
  ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
  THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="SAVE RESULTS"
  DIRECTIVE_ID="SR1" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
  DIRECTIVE_DESC="SAVES RESULTS TO REPOSITORY" />
```

FIG. 21J

2110

```
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="73" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET OWNER" PARAM_NAME="OWNER"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="74" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET" PARAM_NAME="RESULTSET"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">49</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="75" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET METADATA"
PARAM_NAME="RESULTMETADATA" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">50</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="76" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET NAME" PARAM_NAME="RESULTNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">TREND</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="77" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTSET ID" PARAM_NAME="RESULTSETID"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY_NODE_ID="79">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="SAVE RESULTS"
DIRECTIVE_ID="SR1" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
DIRECTIVE_DESC="SAVES RESULTS TO REPOSITORY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="80" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET OWNER" PARAM_NAME="OWNER"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21K

2111

```
- <PARAMETER NODE_ID="81" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET" PARAM_NAME="RESULTSET" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">62</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="82" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">63</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="83" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT SET NAME" PARAM_NAME="RESULTNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">SUMMARY</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="84" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTSET ID" PARAM_NAME="RESULTSETID"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="87">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="PUBLISH PAGE"
DIRECTIVE_ID="CR2" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
DIRECTIVE_DESC="PUBLISHES PAGE & GRANTS SECURITY" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="88" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="GRANT SECURITY LIST" PARAM_NAME="SECDOC"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">162</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="89" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="METADATA FOR SECDOC" PARAM_NAME="SECMETA"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">163</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21L

2112

```
- <PARAMETER NODE_ID="90" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="GRANT SECURITY LIST" PARAM_NAME="SECCOLNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">USERNAME</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="91" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE OWNER" PARAM_NAME="OWNER" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">16</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="92" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE NAME" PARAM_NAME="PAGENAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">STARTPAGE</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="93" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE SLICE NAME" PARAM_NAME="PAGESLICENAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">FIRST</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="94" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE DEFINITION" PARAM_NAME="PAGEDEFN"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE"><DP_PAGE_DEF><LAYER
LAYER_TYPE="HORIZONTAL" LAYER_BORDER="0" LAYER_PADDING="3"
LAYER_HEIGHT="100%" LAYER_WIDTH="100%"><LAYER
LAYER_TYPE="VERTICAL" LAYER_PADDING="3" LAYER_BORDER="0"
LAYER_HEIGHT="225" LAYER_WIDTH="100%"><LAYER LAYER_TYPE="WIDGET"
LAYER_HEIGHT="100%" LAYER_WIDTH="50%"><WIDGET
WIDGET_ID="DP_PIE_CHART"><PARAMETERS><PARAM
PARAM_NAME="TITLE">MY PIE</PARAM><PARAM PARAM_NAME="DSID">#P3#</
PARAM><PARAM PARAM_NAME="VALUECOL">REQUIRED_QUANTITY</
PARAM><PARAM PARAM_NAME="LABELCOL">COMPONENT_ITEM_DESC</
PARAM><PARAM PARAM_NAME="FILTERTYPE">TOP</PARAM><PARAM
PARAM_NAME="FILTERVAL">10</PARAM></PARAMETERS></WIDGET></
LAYER><LAYER LAYER_TYPE="WIDGET" LAYER_HEIGHT="100%"
LAYER_WIDTH="50%"><WIDGET
WIDGET_ID="DP_BAR_CHART2"><PARAMETERS><PARAM
PARAM_NAME="TITLE">MY CHART TITLE</PARAM><PARAM
PARAM_NAME="DSID">#P2#</PARAM><PARAM
PARAM_NAME="MEASURECOLS">QUANTITY_ON_HAND|QUANTITY_ISSUED|QUA
NTITY_SHORT|REQUIRED_QUANTITY</PARAM><PARAM
PARAM_NAME="XAXISLABELS">ON HAND|ISSUED|SHORT|REQUIRED</
PARAM><PARAM PARAM_NAME="SERIESCOL">PERIOD_NAME</PARAM></
PARAMETERS></WIDGET></LAYER></LAYER><LAYER
LAYER_TYPE="HORIZONTAL" LAYER_BORDER="0" LAYER_PADDING="3"
```

FIG. 21M

2113

```
LAYER_HEIGHT="80%" LAYER_WIDTH="100%"><LAYER LAYER_TYPE="WIDGET"
LAYER_HEIGHT="100%" LAYER_WIDTH="100%"><WIDGET
WIDGET_ID="DP_REPORT_VIEWER"><PARAMETERS><PARAM
PARAM_NAME="TITLE">MY TITLE</PARAM> <PARAM
PARAM_NAME="DSID">#P1#</PARAM></PARAMETERS></WIDGET></LAYER></
LAYER></LAYER></DP_PAGE_DEF></PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="95" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="IN RESULTS KEY" PARAM_NAME="P1" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">70</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="96" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="IN RESULTS KEY" PARAM_NAME="P2" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">77</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="97" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="IN RESULTS KEY" PARAM_NAME="P3" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">84</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="98" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="IN RESULTS KEY" PARAM_NAME="P4" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">70</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="99" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="IN RESULTS KEY" PARAM_NAME="P5" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">70</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="100" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="IN RESULTS KEY" PARAM_NAME="P6" PARAM_TYPE="IN">
<PARAM_SOURCE PARAM_TYPE="ID">70</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="101" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE ID" PARAM_NAME="PAGEID" PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="102" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE OWNER" PARAM_NAME="OWNER"
PARAM_TYPE="OUT">
<PARAM_SOURCE />
</PARAMETER>
```

FIG. 21N

2114

```
- <PARAMETER NODE_ID="103" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE NAME" PARAM_NAME="PAGENAME"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="104" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE SLICE NAME" PARAM_NAME="PAGESLICENAME"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="108">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="OUTOF BOUNDS QTY" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="ADVANCED FILTER"
DIRECTIVE_ID="ABFILTER" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
DIRECTIVE_DESC="FILTER RESULTS" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="109" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="FILTER EXPRESSION" PARAM_NAME="FILTER_EXP"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">#REQUIRED_QUANTITY# > 200</
PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="110" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTS METADATA" PARAM_NAME="METADOC"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">63</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="111" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTS" PARAM_NAME="RESULTSDOC" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">62</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
</ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="112" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTS METADATA" PARAM_NAME="METADOC"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
```

FIG. 210

2115

```
- <PARAMETER NODE_ID="113" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTS" PARAM_NAME="RESULTSDOC"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="114" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="ROW COUNT" PARAM_NAME="ROWCOUNT"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="116">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="TEXT EMAILER"
DIRECTIVE_ID="TEXTEMAILER" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
DIRECTIVE_DESC="TEXT EMAILER" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="117" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="SUBJECT EXPRESSION" PARAM_NAME="SUBJECT_EXP"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">OUT OF BOUNDS QTY CONDITION</
PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="118" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="MESSAGE EXPRESSION" PARAM_NAME="MESSAGE_EXP"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">COMPONENT:
#COMPONENT_ITEM_DESC# REQUIRES #REQUIRED_QUANTITY# ADDITIONAL
UNITS</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="119" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="EMAIL ADDRESSES" PARAM_NAME="EMAIL_ADDRESSES"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">EXH@DPAPPLICATIONS.COM</
PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="120" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="SEND FROM ADDRESS" PARAM_NAME="FROM_ADDRESS"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">DF@DPAPPLICATIONS.COM</
PARAM_SOURCE>
</PARAMETER>
```

FIG. 21P

2116

```
- <PARAMETER NODE_ID="121" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTS METADATA" PARAM_NAME="METADOC"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">112</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="122" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULTS" PARAM_NAME="RESULTSDOC" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">113</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="123" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="ERROR MESSAGES" PARAM_NAME="ERROR"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
- <ACTIVITY NODE_ID="125">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="EMAIL LINK" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="SMTP EMAIL DIRECTIVE"
DIRECTIVE_ID="MB2" DIRECTIVE_TYPE="" DIRECTIVE_VERSION="1"
DIRECTIVE_DESC="SEND PUBLISHED PAGES" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="126" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="EMAIL ADDRESSES" PARAM_NAME="ADDRDOC"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">162</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="127" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="METADATA FOR ADDRDOC" PARAM_NAME="ADDRMETA"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">163</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="128" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="EMAIL COLUMN NAME" PARAM_NAME="ADDRCOLNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">EMAIL_ADDRESS</PARAM_SOURCE>
</PARAMETER>
```

FIG. 21Q

2117

```
- <PARAMETER NODE_ID="129" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="EMAIL COLUMN NAME" PARAM_NAME="IDCOLNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">USERNAME</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="130" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="SUBJECT" PARAM_NAME="SUBJECT" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">QTY ANALYSIS UPDATED</
PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="131" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE OWNER" PARAM_NAME="OWNER" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">102</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="132" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE NAME" PARAM_NAME="PAGENAME" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">103</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="133" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="PAGE INSTANCE" PARAM_NAME="PAGEINST"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">104</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="134" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="MAIL FORMAT" PARAM_NAME="FORMAT" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">DYNAM</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="135" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="SEND FROM MAIL ADDRESS" PARAM_NAME="SENDFROM"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">DF@DPAPPLICATIONS.COM</
PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="136" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="ERROR MESSAGES" PARAM_NAME="ERROR_MSG"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
```

FIG. 21R

2118

```
- <ACTIVITY NODE_ID="152">
  <ACTIVITY_HEADER ACTIVITY_NOTES="ACTIVITY NOTES"
ACTIVITY_DESCRIPTION="ACTIVITY DESCRIPTION" />
  <ACTIVITY_IMPLEMENTATION DIRECTIVE_VENDOR="DPA"
THREADING_EFFECT="STANDARD" DIRECTIVE_NAME="DATA DIRECTIVE"
DIRECTIVE_ID="DB3" DIRECTIVE_VERSION="1" DIRECTIVE_DESC="RETRIEVE
DATA AND ASSEMBLE INTO RESULT SET" />
- <ACTIVITY_IN_PARAMETERS>
- <PARAMETER NODE_ID="153" PARAM_DATA_TYPE="PARAMETERIZED SQL
STRING" PARAM_CAPTION="SQL" PARAM_NAME="SQL" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">SELECT
USERNAME,EMAIL_ADDRESS FROM OA3.DF_QTYAPP_USERS</
PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="154" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="CONNECTION STRING"
PARAM_NAME="CONNECTION_STRING" PARAM_TYPE="IN">
  <PARAM_SOURCE
PARAM_TYPE="VALUE">JDBC:ORACLE:THIN:@HD.DPAPPLICATIONS.COM:1521:N
RB816</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="155" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE USER NAME" PARAM_NAME="USERNAME"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">OA3</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="156" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="DATABASE PASSWORD" PARAM_NAME="PWD"
PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="VALUE">OA3</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="157" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P1" PARAM_NAME="P1" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="158" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P2" PARAM_NAME="P2" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
  </PARAMETER>
- <PARAMETER NODE_ID="159" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P3" PARAM_NAME="P3" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
  </PARAMETER>
```

FIG. 21S

2119

```
- <PARAMETER NODE_ID="160" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P4" PARAM_NAME="P4" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
- <PARAMETER NODE_ID="161" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="P5" PARAM_NAME="P5" PARAM_TYPE="IN">
  <PARAM_SOURCE PARAM_TYPE="ID">13</PARAM_SOURCE>
</PARAMETER>
</ACTIVITY_IN_PARAMETERS>
- <ACTIVITY_OUT_PARAMETERS>
- <PARAMETER NODE_ID="162" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT DATA" PARAM_NAME="RESULTSET"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
- <PARAMETER NODE_ID="163" PARAM_DATA_TYPE="STRING"
PARAM_CAPTION="RESULT METADATA" PARAM_NAME="RESULTMETADATA"
PARAM_TYPE="OUT">
  <PARAM_SOURCE />
</PARAMETER>
</ACTIVITY_OUT_PARAMETERS>
</ACTIVITY>
</DF_WORKFLOW_ACTIVITIES>
- <DF_WORKFLOW_TRANSITIONS>
  <TRANSITION NODE_ID="24" FROM_ACTIVITY_ID="11" TO_ACTIVITY_ID="18"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="25" FROM_ACTIVITY_ID="11" TO_ACTIVITY_ID="21"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="71" FROM_ACTIVITY_ID="26" TO_ACTIVITY_ID="65"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="78" FROM_ACTIVITY_ID="39" TO_ACTIVITY_ID="72"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="85" FROM_ACTIVITY_ID="52" TO_ACTIVITY_ID="79"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="105" FROM_ACTIVITY_ID="65" TO_ACTIVITY_ID="87"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="106" FROM_ACTIVITY_ID="72" TO_ACTIVITY_ID="87"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="107" FROM_ACTIVITY_ID="79" TO_ACTIVITY_ID="87"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="115" FROM_ACTIVITY_ID="52" TO_ACTIVITY_ID="108"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
  <TRANSITION NODE_ID="124" FROM_ACTIVITY_ID="108" TO_ACTIVITY_ID="116"
TRANSITION_EXPRESSION="#114# > "0"" DESCRIPTION="EMAIL ONLY EXCEPTIONS"
NOTES="NOTES" />
```

FIG. 21T

2120

```
<TRANSITION NODE_ID="137" FROM_ACTIVITY_ID="87" TO_ACTIVITY_ID="125"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="164" FROM_ACTIVITY_ID="18" TO_ACTIVITY_ID="152"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="165" FROM_ACTIVITY_ID="21" TO_ACTIVITY_ID="152"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="166" FROM_ACTIVITY_ID="152" TO_ACTIVITY_ID="26"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="167" FROM_ACTIVITY_ID="152" TO_ACTIVITY_ID="39"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
<TRANSITION NODE_ID="168" FROM_ACTIVITY_ID="152" TO_ACTIVITY_ID="52"
TRANSITION_EXPRESSION="" DESCRIPTION="DESCRIPTION" NOTES="NOTES" />
</DF_WORKFLOW_TRANSITIONS>
<DF_WORKFLOW_EDITOR>
<ACTIVITY_VISUAL_EDITING NODE_ID="11" YCOORD="140" XCOORD="12" />
<ACTIVITY_VISUAL_EDITING NODE_ID="18" YCOORD="330" XCOORD="47" />
<ACTIVITY_VISUAL_EDITING NODE_ID="21" YCOORD="50" XCOORD="60" />
<ACTIVITY_VISUAL_EDITING NODE_ID="26" YCOORD="200" XCOORD="294" />
<ACTIVITY_VISUAL_EDITING NODE_ID="39" YCOORD="70" XCOORD="294" />
<ACTIVITY_VISUAL_EDITING NODE_ID="52" YCOORD="320" XCOORD="304" />
<ACTIVITY_VISUAL_EDITING NODE_ID="65" YCOORD="200" XCOORD="408" />
<ACTIVITY_VISUAL_EDITING NODE_ID="72" YCOORD="70" XCOORD="408" />
<ACTIVITY_VISUAL_EDITING NODE_ID="79" YCOORD="320" XCOORD="428" />
<ACTIVITY_VISUAL_EDITING NODE_ID="87" YCOORD="200" XCOORD="537" />
<ACTIVITY_VISUAL_EDITING NODE_ID="108" YCOORD="430" XCOORD="359" />
<ACTIVITY_VISUAL_EDITING NODE_ID="116" YCOORD="420" XCOORD="587" />
<ACTIVITY_VISUAL_EDITING NODE_ID="125" YCOORD="320" XCOORD="580" />
<ACTIVITY_VISUAL_EDITING NODE_ID="152" YCOORD="200" XCOORD="160" />
</DF_WORKFLOW_EDITOR>
</DF_WORKFLOW>
```

FIG. 22A

2201

```
<DP_QUERY_DEF VERSION="1">
  <DPA_IDENTIFIERS DATA_SET="OAS" WH_OWNER_NAME="PART"/>
  <HINTS/>
  <COLUMN_DEFS>
    <COLUMN_DEF SUMMARY_TYPE="SUM" COLUMN_NAME="PTD_BUDGET"
      COLUMN_ALIAS="PTD_BUDGET" COLUMN_SORT_ORDER="3"
      COLUMN_SORT_ATTRIBUTE="NONE" COLUMN_TYPE="MEASURE"
      COLUMN_EXPR="" COLUMN_POSITION="3" TABLE_ALIAS="INCOME_STMT_A"
      COLUMN_TAG="PTD_BUDGET"/>
    <COLUMN_DEF SUMMARY_TYPE="NONE" COLUMN_NAME="LINE_NAME"
      COLUMN_ALIAS="LINE_NAME" COLUMN_SORT_ORDER="1"
      COLUMN_SORT_ATTRIBUTE="ASC" COLUMN_TYPE="ATTRIBUTE"
      COLUMN_EXPR="" COLUMN_POSITION="1" TABLE_ALIAS="INC_STMT_LINES_D"
      COLUMN_TAG="LINE_NAME"/>
    <COLUMN_DEF SUMMARY_TYPE="SUM"
      COLUMN_NAME="PTD_VARIANCE_PCT" COLUMN_ALIAS="PTD_VARIANCE_PCT"
      COLUMN_SORT_ORDER="6" COLUMN_SORT_ATTRIBUTE="NONE"
      COLUMN_TYPE="MEASURE" COLUMN_EXPR="" COLUMN_POSITION="6"
      TABLE_ALIAS="INCOME_STMT_A" COLUMN_TAG="PTD_VAR_PCT"/>
    <COLUMN_DEF SUMMARY_TYPE="NONE"
      COLUMN_NAME="DEPARTMENT_DESC" COLUMN_ALIAS="DEPT_DESC"
      COLUMN_SORT_ORDER="2" COLUMN_SORT_ATTRIBUTE="ASC"
      COLUMN_TYPE="ATTRIBUTE" COLUMN_EXPR="" COLUMN_POSITION="2"
      TABLE_ALIAS="DEPARTMENT_D" COLUMN_TAG="DEPT_DESC"/>
    <COLUMN_DEF SUMMARY_TYPE="SUM" COLUMN_NAME="PTD_VARIANCE"
      COLUMN_ALIAS="PTD_VARIANCE" COLUMN_SORT_ORDER="5"
      COLUMN_SORT_ATTRIBUTE="NONE" COLUMN_TYPE="MEASURE"
      COLUMN_EXPR="" COLUMN_POSITION="5" TABLE_ALIAS="INCOME_STMT_A"
      COLUMN_TAG="PTD_VAR"/>
    <COLUMN_DEF SUMMARY_TYPE="SUM" COLUMN_NAME="PTD_ACTUAL"
      COLUMN_ALIAS="PTD_ACTUAL" COLUMN_SORT_ORDER="4"
      COLUMN_SORT_ATTRIBUTE="NONE" COLUMN_TYPE="MEASURE"
      COLUMN_EXPR="" COLUMN_POSITION="4" TABLE_ALIAS="INCOME_STMT_A"
      COLUMN_TAG="PTD_ACTUAL"/>
  </COLUMN_DEFS>
```

FIG. 22B

2202

```
<TABLE_DEFS>
  <TABLE_DEF TABLE_ALIAS="VENDOR_D" TABLE_NAME="VENDOR_D"/>
  <TABLE_DEF TABLE_ALIAS="AP_INV_DETAIL_F"
TABLE_NAME="AP_INV_DETAIL_F"/>
  <TABLE_DEF TABLE_ALIAS="INCOME_STMT_A"
TABLE_NAME="INCOME_STMT_A"/>
  <TABLE_DEF TABLE_ALIAS="DEPARTMENT_D"
TABLE_NAME="DEPARTMENT_D"/>
  <TABLE_DEF TABLE_ALIAS="INC_STMT_LINES_D"
TABLE_NAME="INC_STMT_LINES_D"/>
</TABLE_DEFS>
<DETAIL_FILTERS>
  <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="PERIOD_KEY"
TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
FILTER_OPERATOR="=">
    <FILTER_VALUE VALUE_DATA_TYPE="STRING">DEC-97</FILTER_VALUE>
  </FILTER>
  <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="VENDOR_TYPE"
TABLE_ALIAS="VENDOR_D" FILTER_PREC_OPER="AND" FILTER_OPERATOR="=">
    <FILTER_VALUE VALUE_DATA_TYPE="STRING">EMPLOYEE</
FILTER_VALUE>
  </FILTER>
  <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="COMPANY_KEY"
TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
FILTER_OPERATOR="=">
    <FILTER_VALUE VALUE_DATA_TYPE="STRING">01</FILTER_VALUE>
  </FILTER>
  <FILTER FILTER_TYPE="VALUE" COLUMN_TEXT="DEPARTMENT_KEY"
TABLE_ALIAS="AP_INV_DETAIL_F" FILTER_PREC_OPER="AND"
FILTER_OPERATOR="=">
    <FILTER_VALUE VALUE_DATA_TYPE="STRING">560</FILTER_VALUE>
  </FILTER>
</DETAIL_FILTERS>
<AGGREGATE_FILTERS>
  <FILTER FILTER_TYPE="VALUE"
COLUMN_TEXT="SUM(INVOICE_LINE_AMOUNT)" TABLE_ALIAS="AP_INV_DETAIL_F"
FILTER_PREC_OPER="AND" FILTER_OPERATOR="&GT;">
    <FILTER_VALUE VALUE_DATA_TYPE="NUMBER">0</FILTER_VALUE>
  </FILTER>
</AGGREGATE_FILTERS>
</DP_QUERY_DEF>
```

FIG. 23A

2301

```
- <DP_SCHEMA_DOC VERSION="1">
  <DPA_QUERY_SERVER_INFO SERVICE="DPA_QUERY_SERVER"
  MACHINE="EXH_2K" PORT="8069"
  WAREHOUSE_SERVER="HD.DPAPPLICATIONS.COM"
  WAREHOUSE_DBNAME="DEMO30" WAREHOUSE_OWNER="RROC"
  SCHEMA="AP_INV_DETAIL_F" DATA_SET="NW">FOODADDY</
  DPA_QUERY_SERVER_INFO>
- <DP_DIMENSIONS>
- <DIMENSION LABEL="ACCOUNTING DATE" NAME="ACCOUNTING_DATE_D">
  <ATTRIBUTE LABEL="ACCOUNTING DATE KEY"
  NAME="ACCOUNTING_DATE_KEY" />
  <ATTRIBUTE LABEL="ACCOUNTING MONTH" NAME="ACCOUNTING_MONTH" />
  <ATTRIBUTE LABEL="ACCOUNTING PERIOD" NAME="ACCOUNTING_PERIOD" />
  <ATTRIBUTE LABEL="ACCOUNTING PERIOD KEY"
  NAME="ACCOUNTING_PERIOD_KEY" />
  <ATTRIBUTE LABEL="ACCOUNTING PERIOD QUARTER"
  NAME="ACCOUNTING_PERIOD_QUARTER" />
  <ATTRIBUTE LABEL="ACCOUNTING QUARTER"
  NAME="ACCOUNTING_QUARTER" />
  <ATTRIBUTE LABEL="ACCOUNTING WEEK ENDING"
  NAME="ACCOUNTING_WEEK_ENDING" />
  <ATTRIBUTE LABEL="ACCOUNTING YEAR" NAME="ACCOUNTING_YEAR" />
  </DIMENSION>
- <DIMENSION LABEL="ACCOUNT" NAME="ACCOUNT_D">
  <ATTRIBUTE LABEL="ACCOUNT" NAME="ACCOUNT" />
  <ATTRIBUTE LABEL="LINE NAME" NAME="LINE_NAME" />
  <ATTRIBUTE LABEL="LINE SEQUENCE KEY" NAME="LINE_SEQUENCE_KEY" />
  <ATTRIBUTE LABEL="REPORT SECTION" NAME="REPORT_SECTION" />
  <ATTRIBUTE LABEL="REPORT SEQUENCE" NAME="REPORT_SEQUENCE" />
  <ATTRIBUTE LABEL="ACCOUNT KEY" NAME="ACCOUNT_KEY" />
  <ATTRIBUTE LABEL="ACCOUNT DESCRIPTION" NAME="ACCOUNT_DESC" />
  </DIMENSION>
- <DIMENSION LABEL="ACCOUNT ROLLUPS" NAME="ACCOUNT_RLUP_D">
  <ATTRIBUTE LABEL="ACCOUNT" NAME="ACCOUNT" />
  <ATTRIBUTE LABEL="ACCOUNT KEY" NAME="ACCOUNT_KEY" />
  <ATTRIBUTE LABEL="ACCOUNT ROLLUP DESCRIPTION"
  NAME="ROLLUP_DESC" />
  <ATTRIBUTE LABEL="ACCOUNT ROLLUP CODE" NAME="ROLLUP_CODE" />
  <ATTRIBUTE LABEL="ACCOUNT DESCRIPTION" NAME="ACCOUNT_DESC" />
  </DIMENSION>
```

FIG. 23B

2302

```
- <DIMENSION LABEL="AP HOLD CODES" NAME="AP_HOLD_CODE_D">
  <ATTRIBUTE LABEL="AP HOLD CODE" NAME="AP_HOLD_CODE" />
  <ATTRIBUTE LABEL="AP HOLD CODE DESCRIPTION"
NAME="AP_HOLD_CODE_DESC" />
  <ATTRIBUTE LABEL="AP HOLD CODE KEY" NAME="AP_HOLD_CODE_KEY" />
  <ATTRIBUTE LABEL="AP HOLD CODE TYPE" NAME="AP_HOLD_CODE_TYPE" />
</DIMENSION>
- <DIMENSION LABEL="AP HOLD STATUS" NAME="AP_HOLD_STATUS_D">
  <ATTRIBUTE LABEL="AP HOLD STATUS" NAME="AP_HOLD_STATUS" />
  <ATTRIBUTE LABEL="AP HOLD STATUS KEY" NAME="AP_HOLD_STATUS_KEY" /
>
</DIMENSION>
- <DIMENSION LABEL="AP INVOICES" NAME="AP_INVOICE_D">
  <ATTRIBUTE LABEL="AP INVOICE NUMBER" NAME="AP_INVOICE" />
  <ATTRIBUTE LABEL="AP INVOICE DATE" NAME="AP_INVOICE_DATE" />
  <ATTRIBUTE LABEL="AP INVOICE KEY" NAME="AP_INVOICE_KEY" />
</DIMENSION>
- <DIMENSION LABEL="AP INVOICE TYPES" NAME="AP_INVOICE_TYPE_D">
  <ATTRIBUTE LABEL="AP INVOICE TYPE" NAME="AP_INVOICE_TYPE" />
  <ATTRIBUTE LABEL="AP INVOICE TYPE KEY" NAME="AP_INVOICE_TYPE_KEY" /
>
</DIMENSION>
- <DIMENSION LABEL="AP PAYMENT TERMS" NAME="AP_PAYMENT_TERM_D">
  <ATTRIBUTE LABEL="AP PAYMENT TERM" NAME="AP_PAYMENT_TERM" />
  <ATTRIBUTE LABEL="AP PAYMENT TERM DESCRIPTION"
NAME="AP_PAYMENT_TERM_DESC" />
  <ATTRIBUTE LABEL="AP PAYMENT TERM KEY"
NAME="AP_PAYMENT_TERM_KEY" />
</DIMENSION>
- <DIMENSION LABEL="PO AUTHORIZER" NAME="AUTHORIZER_D">
  <ATTRIBUTE LABEL="AUTHORIZER" NAME="AUTHORIZER" />
  <ATTRIBUTE LABEL="AUTHORIZER KEY" NAME="AUTHORIZER_KEY" />
</DIMENSION>
- <DIMENSION LABEL="BUYERS" NAME="BUYER_D">
  <ATTRIBUTE LABEL="BUYER" NAME="BUYER" />
  <ATTRIBUTE LABEL="AUTHORIZATION LIMIT"
NAME="BUYER_AUTHORIZATION_LIMIT" />
  <ATTRIBUTE LABEL="END DATE ACTIVE" NAME="BUYER_END_DATE_ACTIVE" />
  <ATTRIBUTE LABEL="BUYER KEY" NAME="BUYER_KEY" />
  <ATTRIBUTE LABEL="START DATE ACTIVE"
NAME="BUYER_START_DATE_ACTIVE" />
</DIMENSION>
```

FIG. 23C

2303

```
- <DIMENSION LABEL="COMPANY" NAME="COMPANY_D">
  <ATTRIBUTE LABEL="COMPANY" NAME="COMPANY" />
  <ATTRIBUTE LABEL="COMPANY DESCRIPTION" NAME="COMPANY_DESC" />
  <ATTRIBUTE LABEL="COMPANY KEY" NAME="COMPANY_KEY" />
</DIMENSION>
- <DIMENSION LABEL="CURRENCY" NAME="CURRENCY_D">
  <ATTRIBUTE LABEL="CURRENCY" NAME="CURRENCY" />
  <ATTRIBUTE LABEL="CURRENCY DESCRIPTION" NAME="CURRENCY_DESC" />
  <ATTRIBUTE LABEL="CURRENCY KEY" NAME="CURRENCY_KEY" />
</DIMENSION>
- <DIMENSION LABEL="DEPARTMENT" NAME="DEPARTMENT_D">
  <ATTRIBUTE LABEL="DEPARTMENT" NAME="DEPARTMENT" />
  <ATTRIBUTE LABEL="DEPARTMENT KEY" NAME="DEPARTMENT_KEY" />
  <ATTRIBUTE LABEL="DEPARTMENT DESCRIPTION" NAME="DEPARTMENT_DESC" />
>
</DIMENSION>
- <DIMENSION LABEL="DEPARTMENT ROLLUPS" NAME="DEPARTMENT_RLUP_D">
  <ATTRIBUTE LABEL="DEPARTMENT" NAME="DEPARTMENT" />
  <ATTRIBUTE LABEL="DEPARTMENT ROLLUP DESC" NAME="ROLLUP_DESC" />
  <ATTRIBUTE LABEL="DEPARTMENT ROLLUP CODE" NAME="ROLLUP_CODE" />
  <ATTRIBUTE LABEL="DEPARTMENT DESCRIPTION" NAME="DEPARTMENT_DESC" />
>
  <ATTRIBUTE LABEL="DEPARTMENT KEY" NAME="DEPARTMENT_KEY" />
</DIMENSION>
- <DIMENSION LABEL="AP DUE DATES" NAME="DUE_DATE_D">
  <ATTRIBUTE LABEL="DUE DATE KEY" NAME="DUE_DATE_KEY" />
  <ATTRIBUTE LABEL="DUE MONTH" NAME="DUE_MONTH" />
  <ATTRIBUTE LABEL="DUE PERIOD" NAME="DUE_PERIOD" />
  <ATTRIBUTE LABEL="DUE PERIOD KEY" NAME="DUE_PERIOD_KEY" />
  <ATTRIBUTE LABEL="DUE PERIOD QUARTER" NAME="DUE_PERIOD_QUARTER" />
  <ATTRIBUTE LABEL="DUE QUARTER" NAME="DUE_QUARTER" />
  <ATTRIBUTE LABEL="DUE WEEK ENDING" NAME="DUE_WEEK_ENDING" />
  <ATTRIBUTE LABEL="DUE YEAR" NAME="DUE_YEAR" />
</DIMENSION>
- <DIMENSION LABEL="INVOICE DATES" NAME="INVOICE_DATE_D">
  <ATTRIBUTE LABEL="INVOICE DATE KEY" NAME="INVOICE_DATE_KEY" />
  <ATTRIBUTE LABEL="INVOICE MONTH" NAME="INVOICE_MONTH" />
  <ATTRIBUTE LABEL="INVOICE PERIOD" NAME="INVOICE_PERIOD" />
  <ATTRIBUTE LABEL="INVOICE PERIOD KEY" NAME="INVOICE_PERIOD_KEY" />
  <ATTRIBUTE LABEL="INVOICE PERIOD QUARTER"
NAME="INVOICE_PERIOD_QUARTER" />
  <ATTRIBUTE LABEL="INVOICE QUARTER" NAME="INVOICE_QUARTER" />
  <ATTRIBUTE LABEL="INVOICE WEEK ENDING" NAME="INVOICE_WEEK_ENDING" />
  <ATTRIBUTE LABEL="INVOICE YEAR" NAME="INVOICE_YEAR" />
</DIMENSION>
```

FIG. 23D

2304

```
- <DIMENSION LABEL="JE BATCHS" NAME="JE_BATCH_D">
  <ATTRIBUTE LABEL="ACTUAL FLAG" NAME="ACTUAL_FLAG" />
  <ATTRIBUTE LABEL="DEFAULT PERIOD NAME"
NAME="DEFAULT_PERIOD_NAME" />
  <ATTRIBUTE LABEL="JE BATCH KEY" NAME="JE_BATCH_KEY" />
  <ATTRIBUTE LABEL="NAME" NAME="NAME" />
  <ATTRIBUTE LABEL="ORG ID" NAME="ORG_ID" />
  <ATTRIBUTE LABEL="DESCRIPTION" NAME="DESCRIPTION" />
  <ATTRIBUTE LABEL="DATE CREATED" NAME="DATE_CREATED" />
</DIMENSION>
- <DIMENSION LABEL="ORGANIZATIONS" NAME="ORGANIZATION_D">
  <ATTRIBUTE LABEL="ORGANIZATION" NAME="ORGANIZATION" />
  <ATTRIBUTE LABEL="ORGANIZATION KEY" NAME="ORGANIZATION_KEY" />
  <ATTRIBUTE LABEL="ORGANIZATION TYPE" NAME="ORGANIZATION_TYPE" />
</DIMENSION>
- <DIMENSION LABEL="PA PROJECTS" NAME="PA_PROJECT_D">
  <ATTRIBUTE LABEL="PROJECT KEY" NAME="PA_PROJECT_KEY" />
  <ATTRIBUTE LABEL="PROJECT COMPLETE DATE"
NAME="PROJECT_COMPLETE_DATE" />
  <ATTRIBUTE LABEL="PROJECT MANAGER" NAME="PROJECT_MANAGER" />
  <ATTRIBUTE LABEL="PROJECT NAME" NAME="PROJECT_NAME" />
  <ATTRIBUTE LABEL="PROJECT NUMBER" NAME="PROJECT_NUMBER" />
  <ATTRIBUTE LABEL="PROJECT OFFICER" NAME="PROJECT_OFFICER" />
  <ATTRIBUTE LABEL="PROJECT SPONSOR" NAME="PROJECT_SPONSOR" />
  <ATTRIBUTE LABEL="PROJECT START DATE" NAME="PROJECT_START_DATE" />
  <ATTRIBUTE LABEL="PROJECT STATUS" NAME="PROJECT_STATUS" />
  <ATTRIBUTE LABEL="PROJECT TITLE" NAME="PROJECT_TITLE" />
  <ATTRIBUTE LABEL="PROJECT TYPE" NAME="PROJECT_TYPE" />
</DIMENSION>
- <DIMENSION LABEL="PA TASKS" NAME="PA_TASK_D">
  <ATTRIBUTE LABEL="PARENT TASK KEY" NAME="PARENT_TASK_KEY" />
  <ATTRIBUTE LABEL="TASK LOCATION" NAME="TASK_LOCATION" />
  <ATTRIBUTE LABEL="TASK NAME" NAME="TASK_NAME" />
  <ATTRIBUTE LABEL="TASK MANAGER" NAME="TASK_MANAGER" />
  <ATTRIBUTE LABEL="TOP TASK NAME" NAME="TOP_TASK_NAME" />
  <ATTRIBUTE LABEL="TOP TASK KEY" NAME="TOP_TASK_KEY" />
  <ATTRIBUTE LABEL="TASK WBS" NAME="TASK_WBS" />
  <ATTRIBUTE LABEL="TASK START DATE" NAME="TASK_START_DATE" />
  <ATTRIBUTE LABEL="TASK NUMBER" NAME="TASK_NUMBER" />
  <ATTRIBUTE LABEL="TASK DESCRIPTION" NAME="TASK_DESC" />
  <ATTRIBUTE LABEL="PARENT TASK NAME" NAME="PARENT_TASK_NAME" />
  <ATTRIBUTE LABEL="PROJECT KEY" NAME="PA_PROJECT_KEY" />
  <ATTRIBUTE LABEL="TASK COMPLETE DATE" NAME="TASK_COMPLETE_DATE" />
>
  <ATTRIBUTE LABEL="TASK KEY" NAME="PA_TASK_KEY" />
</DIMENSION>
```

FIG. 23E

2305

```
- <DIMENSION LABEL="PERIODS" NAME="PERIOD_D">
  <ATTRIBUTE LABEL="PERIOD" NAME="PERIOD" />
  <ATTRIBUTE LABEL="PERIOD END DATE" NAME="PERIOD_END_DATE" />
  <ATTRIBUTE LABEL="PERIOD KEY" NAME="PERIOD_KEY" />
  <ATTRIBUTE LABEL="PERIOD START DATE" NAME="PERIOD_START_DATE" />
  <ATTRIBUTE LABEL="PERIOD TYPE" NAME="PERIOD_TYPE" />
  <ATTRIBUTE LABEL="QUARTER" NAME="QUARTER" />
  <ATTRIBUTE LABEL="YEAR" NAME="YEAR" />
</DIMENSION>
- <DIMENSION LABEL="PRODUCT" NAME="PRODUCT_D">
  <ATTRIBUTE LABEL="PRODUCT" NAME="PRODUCT" />
  <ATTRIBUTE LABEL="PRODUCT DESCRIPTION" NAME="PRODUCT_DESC" />
  <ATTRIBUTE LABEL="PRODUCT KEY" NAME="PRODUCT_KEY" />
</DIMENSION>
- <DIMENSION LABEL="PA PROJECT CLASSES" NAME="PROJECT_CLASS_D">
  <ATTRIBUTE LABEL="PROJECT CLASS CATEGORY"
NAME="PROJECT_CLASS_CATEGORY" />
  <ATTRIBUTE LABEL="PROJECT CLASS CODE" NAME="PROJECT_CLASS_CODE" /
>
  <ATTRIBUTE LABEL="PROJECT CLASS DESCRIPTION"
NAME="PROJECT_CLASS_DESCRIPTION" />
  <ATTRIBUTE LABEL="PROJECT KEY" NAME="PROJECT_KEY" />
</DIMENSION>
- <DIMENSION LABEL="PO REQUESTORS" NAME="REQUESTOR_D">
  <ATTRIBUTE LABEL="REQUESTOR" NAME="REQUESTOR" />
  <ATTRIBUTE LABEL="REQUESTOR KEY" NAME="REQUESTOR_KEY" />
</DIMENSION>
- <DIMENSION LABEL="SUB-ACCOUNT" NAME="SUB_ACCOUNT_D">
  <ATTRIBUTE LABEL="SUB-ACCOUNT" NAME="SUB_ACCOUNT" />
  <ATTRIBUTE LABEL="SUB-ACCOUNT KEY" NAME="SUB_ACCOUNT_KEY" />
  <ATTRIBUTE LABEL="SUB-ACCOUNT DESCRIPTION"
NAME="SUB_ACCOUNT_DESC" />
</DIMENSION>
- <DIMENSION LABEL="AP VENDORS" NAME="VENDOR_D">
  <ATTRIBUTE LABEL="ACTIVE END DATE" NAME="ACTIVE_END_DATE" />
  <ATTRIBUTE LABEL="ACTIVE FLAG" NAME="ACTIVE_FLAG" />
  <ATTRIBUTE LABEL="ACTIVE START DATE" NAME="ACTIVE_START_DATE" />
  <ATTRIBUTE LABEL="VENDOR SITE ADDRESS LINE1" NAME="ADDRESS_LINE1" />
  <ATTRIBUTE LABEL="VENDOR SITE ADDRESS LINE2" NAME="ADDRESS_LINE2" />
  <ATTRIBUTE LABEL="VENDOR SITE ADDRESS LINE3" NAME="ADDRESS_LINE3" />
  <ATTRIBUTE LABEL="VENDOR SITE AREA CODE" NAME="AREA_CODE" />
  <ATTRIBUTE LABEL="VENDOR SITE CITY" NAME="CITY" />
  <ATTRIBUTE LABEL="VENDOR HOLD REASON" NAME="HOLD_REASON" />
  <ATTRIBUTE LABEL="VENDOR SITE PHONE NUMBER" NAME="PHONE_NUMBER" /
>
```

FIG. 23F

2306

```
<ATTRIBUTE LABEL="VENDOR SITE PROVINCE" NAME="PROVINCE" />
<ATTRIBUTE LABEL="VENDOR SITE STATE" NAME="STATE" />
<ATTRIBUTE LABEL="VENDOR TAX FEDERAL FLAG"
NAME="TAX_FEDERAL_REPORT_FLAG" />
<ATTRIBUTE LABEL="VENDOR TAX REPORTING NAME"
NAME="TAX_REPORTING_NAME" />
<ATTRIBUTE LABEL="VENDOR TAX STATE FLAG"
NAME="TAX_STATE_REPORT_FLAG" />
<ATTRIBUTE LABEL="VENDOR 1099 NUMBER" NAME="VENDOR_1099_NUM" />
<ATTRIBUTE LABEL="VENDOR 1099 TYPE" NAME="VENDOR_1099_TYPE" />
<ATTRIBUTE LABEL="VENDOR CORPORATE GROUP"
NAME="VENDOR_CORPORATE_GROUP" />
<ATTRIBUTE LABEL="VENDOR INDUSTRY CLASS"
NAME="VENDOR_INDUSTRY_CLASS" />
<ATTRIBUTE LABEL="VENDOR KEY" NAME="VENDOR_KEY" />
<ATTRIBUTE LABEL="VENDOR NAME" NAME="VENDOR_NAME" />
<ATTRIBUTE LABEL="VENDOR NUMBER" NAME="VENDOR_NUMBER" />
<ATTRIBUTE LABEL="VENDOR ORGANIZATION TYPE"
NAME="VENDOR_ORG_TYPE" />
<ATTRIBUTE LABEL="VENDOR PAYMENT PRIORITY"
NAME="VENDOR_PAYMENT_PRIORITY" />
<ATTRIBUTE LABEL="VENDOR PAY GROUP" NAME="VENDOR_PAY_GROUP" />
<ATTRIBUTE LABEL="VENDOR SITE CODE" NAME="VENDOR_SITE_CODE" />
<ATTRIBUTE LABEL="VENDOR SITE KEY" NAME="VENDOR_SITE_KEY" />
<ATTRIBUTE LABEL="VENDOR TYPE" NAME="VENDOR_TYPE" />
<ATTRIBUTE LABEL="VENDOR SITE ZIP" NAME="ZIP" />
</DIMENSION>
- <DIMENSION LABEL="AP INVOICE DETAILS" NAME="AP_INV_DETAIL_F">
  <ATTRIBUTE LABEL="ACCOUNTING DATE" NAME="ACCOUNTING_DATE" />
  <ATTRIBUTE LABEL="ACCOUNTING DATE KEY" NAME="ACCOUNTING_DATE_KEY"
/>
  <ATTRIBUTE LABEL="ACCOUNT KEY" NAME="ACCOUNT_KEY" />
  <ATTRIBUTE LABEL="APPROVAL STATUS" NAME="APPROVAL_STATUS" />
  <ATTRIBUTE LABEL="AP INVOICE KEY" NAME="AP_INVOICE_KEY" />
  <ATTRIBUTE LABEL="AP INVOICE TYPE KEY" NAME="AP_INVOICE_TYPE_KEY" />
  <ATTRIBUTE LABEL="AP PAYMENT TERM KEY" NAME="AP_PAYMENT_TERM_KEY"
/>
  <ATTRIBUTE LABEL="BUYER KEY" NAME="BUYER_KEY" />
  <ATTRIBUTE LABEL="COMPANY KEY" NAME="COMPANY_KEY" />
  <ATTRIBUTE LABEL="INVOICE CURRENCY CODE" NAME="CURRENCY_KEY" />
  <ATTRIBUTE LABEL="DEPARTMENT KEY" NAME="DEPARTMENT_KEY" />
  <ATTRIBUTE LABEL="DUE DATE" NAME="DUE_DATE" />
  <ATTRIBUTE LABEL="DUE DATE KEY" NAME="DUE_DATE_KEY" />
  <ATTRIBUTE LABEL="TOTAL INVOICE AMOUNT" NAME="INVOICE_AMOUNT" />
```

FIG. 23G

2307

```
<ATTRIBUTE LABEL="INVOICE DATE" NAME="INVOICE_DATE" />
<ATTRIBUTE LABEL="INVOICE DATE KEY" NAME="INVOICE_DATE_KEY" />
<ATTRIBUTE LABEL="INVOICE DESCRIPTION" NAME="INVOICE_DESC" />
<ATTRIBUTE LABEL="INVOICE ID KEY" NAME="INVOICE_ID_KEY" />
<ATTRIBUTE LABEL="INVOICE LINE DESCRIPTION"
NAME="INVOICE_LINE_DESC" />
<ATTRIBUTE LABEL="INVOICE LINE NUMBER" NAME="INVOICE_LINE_NUMBER" /
>
<ATTRIBUTE LABEL="INVOICE LINE TYPE" NAME="INVOICE_LINE_TYPE" />
<ATTRIBUTE LABEL="INVOICE NUMBER" NAME="INVOICE_NUMBER" />
<ATTRIBUTE LABEL="INVOICE TAX AMOUNT" NAME="INVOICE_TAX_AMOUNT" />
<ATTRIBUTE LABEL="ORGANIZATION KEY" NAME="ORGANIZATION_KEY" />
<ATTRIBUTE LABEL="PAID AMOUNT" NAME="PAID_AMOUNT" />
<ATTRIBUTE LABEL="PA PROJECT KEY" NAME="PA_PROJECT_KEY" />
<ATTRIBUTE LABEL="PA TASK KEY" NAME="PA_TASK_KEY" />
<ATTRIBUTE LABEL="PERIOD KEY" NAME="PERIOD_KEY" />
<ATTRIBUTE LABEL="POSTED FLAG" NAME="POSTED_FLAG" />
<ATTRIBUTE LABEL="PO CREATION DATE" NAME="PO_CREATED_DATE" />
<ATTRIBUTE LABEL="PO NUMBER" NAME="PO_NUMBER" />
<ATTRIBUTE LABEL="PRODUCT KEY" NAME="PRODUCT_KEY" />
<ATTRIBUTE LABEL="RECURRING INVOICE FLAG"
NAME="RECURRING_INVOICE_FLAG" />
<ATTRIBUTE LABEL="SUB-ACCOUNT KEY" NAME="SUB_ACCOUNT_KEY" />
<ATTRIBUTE LABEL="TRANSLATED CURRENCY CODE"
NAME="TRANSLATED_CURRENCY_CODE" />
<ATTRIBUTE LABEL="VENDOR KEY" NAME="VENDOR_KEY" />
</DIMENSION>
</DP_DIMENSIONS>
- <MEASURES LABEL="AP INVOICE DETAILS" NAME="AP_INV_DETAIL_F">
  <MEASURE LABEL="ACCOUNTING (PRE-AP) LAG DAYS"
NAME="ACCOUNTING_LAG_DAYS" />
  <MEASURE LABEL="INVOICE LINE AMOUNT" NAME="INVOICE_LINE_AMOUNT" />
  <MEASURE LABEL="INVOICE LINE EXCHANGE RATE VARIANCE"
NAME="INVOICE_LINE_EXCH_RATE_VAR" />
  <MEASURE LABEL="INVOICE LINE PRICE VARIANCE"
NAME="INVOICE_LINE_PRICE_VARIANCE" />
  <MEASURE LABEL="NUMBER OF INVOICE LINES"
NAME="NUMBER_INVOICE_LINES" />
  <MEASURE LABEL="TRANSLATED CURRENCY AMOUNT"
NAME="TRANSLATED_CURRENCY_AMOUNT" />
  <MEASURE LABEL="UNPAID AMOUNT" NAME="UNPAID_AMOUNT" />
</MEASURES>
</DP_SCHEMA_DOC>
```

FIG. 24

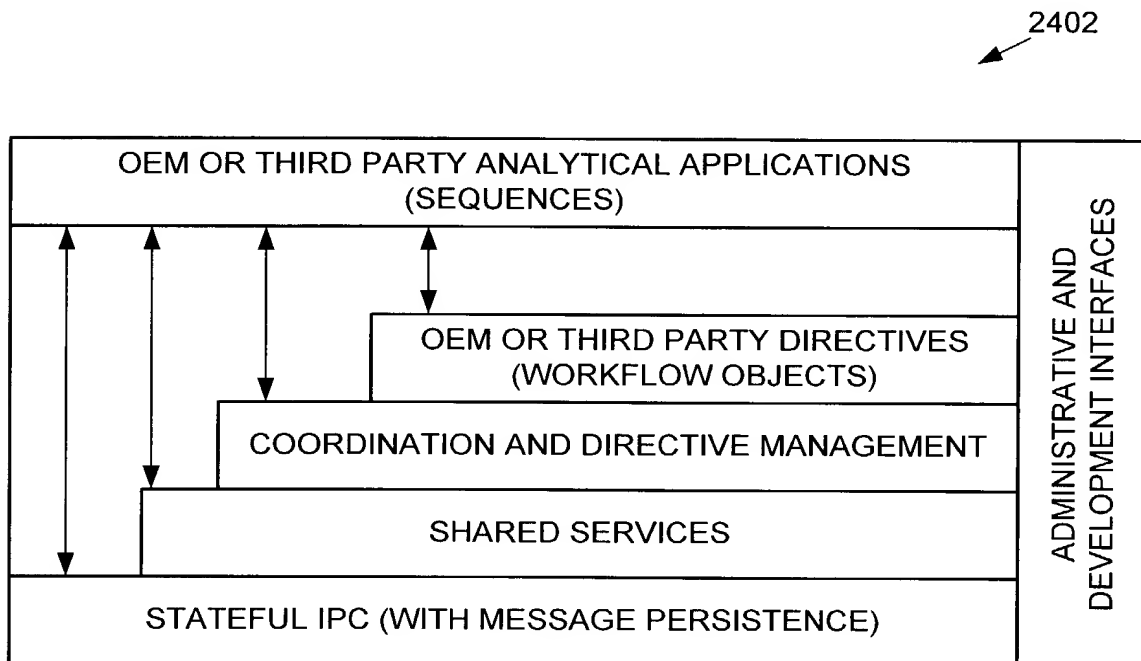


FIG. 25

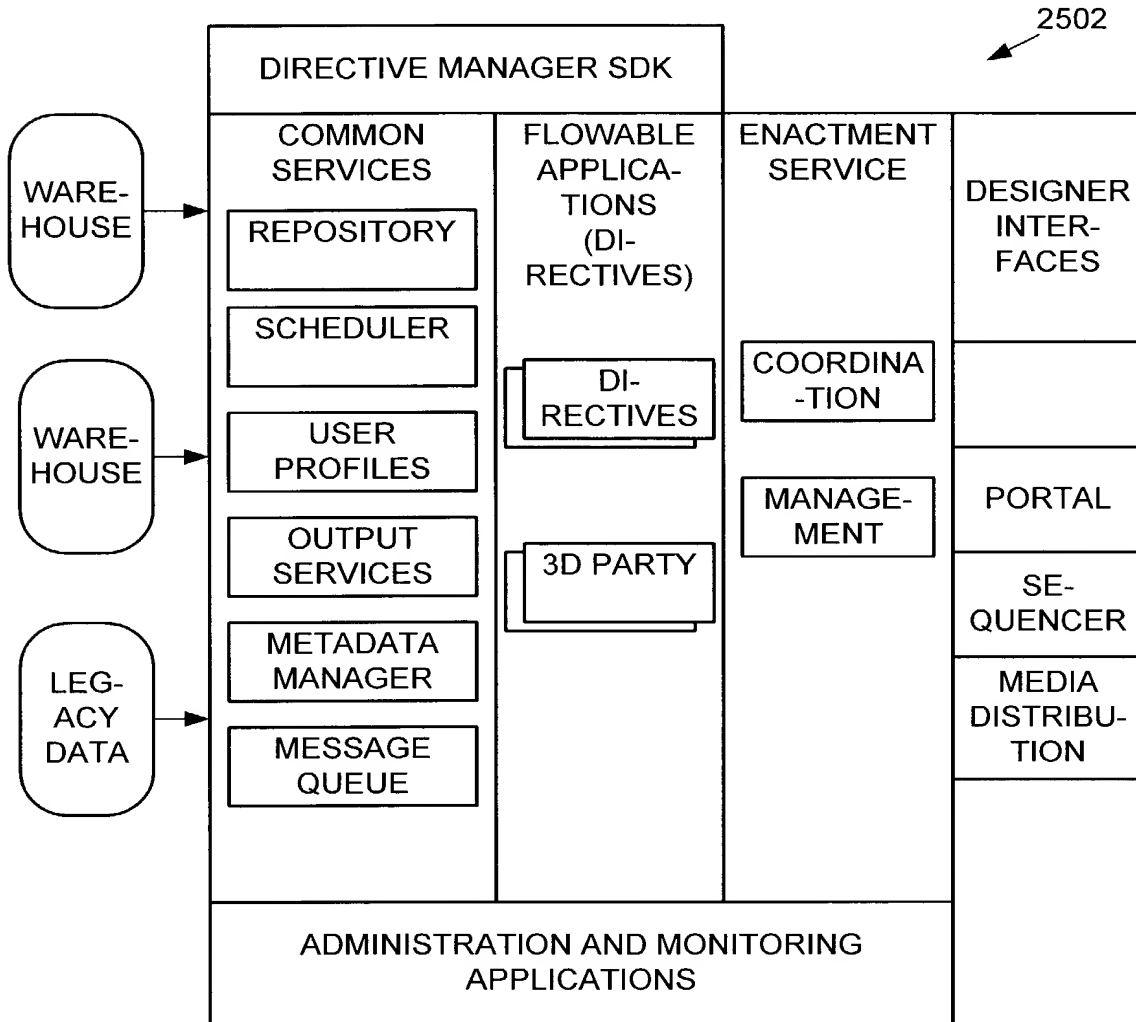


FIG. 26

